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ABSTRACTS

FIBERS A

HANDBOOK OF TEXTILE FIBERS. 2d ed. J. G. Cook. Merrow Pub. Co. Ltd, 276 Hempstead Road, Watford, Herts., England. 1960. 428 p. $3.50 [approx.].
Revised and brought up-to-date. Some new synthetic fibers have been included, particularly of the polypropylene type. For the first edition, see abstr. 3182/59. (4923)

Natural fibers A1

MODULI OF COTTON FIBERS AND YARNS IN RELATION TO X-RAY ANGLES. L. C. Weiss, R. S. Orr, J. J. Redmann, and J. N. Grant (So. Reg. Research Lab.). Textile Research J. 31: 787–793 (Sept. 1961).
In the present investigation, attempts were made to use x-ray angle (degree of crystallite orientation) and secant modulus to trace the behavior of different cotton varieties from below the fiber level through the single-fiber and fiber-bundle levels to the yarn level. The information obtained from these indices of the stress-strain modulus is used to indicate how fiber properties are retained or transformed in the final yarn structure. 15 refs. (4924)

GINNING RESEARCH TO MAINTAIN QUALITY. W. M. Hurst. Cotton Gin & Oil Mill Press 62: 7, 31 (Sept. 2, 1961).
Report on current research at USDA's three cotton ginning research laboratories. (4925)

OVERDRYING COTTON AT GIN CAN CHANGE FIBER SHAPE. L. P. Berriman (Stanford Research Inst.). Textile Inds. 125: 25, 114 (Sept. 1961).
Extract from paper presented at Western Cotton Production Conference. (4926)

GIVE THE MILLS THE COTTON QUALITIES THEY NEED. J. L. Delany (Joanna Cotton Mills Co.). Textile Bull. 87: 41, 44, 85 (Sept. 1961).
The need for producing uniformly long staple, strong, and fine cotton fibers at the gin to satisfy spinners' requirements is emphasized. (4927)

COTTON MILLS CAN GROW THEIR OWN. B. Colton. Textile Inds. 125: 123–124 (Sept. 1961).
The author examines the pros and cons of cotton growing as a phase of mill operations. (4928)

DOGGY WOOL. W. R. Lang. Pastoral Rev. 70: 1213–1214 (1960). Through J. Textile Inst. 52: A293 (1961).
The article reviews what is known of the cause of abnormal fleeces of this type. (4929)

MISSISSIPPI COTTON VARIETY TESTS FOR 1960. J. B. Dick and others. Mississippi State Univ., Agri. Experiment Station, State College, Miss. Jan. 1961. 16 p. Bull. 611. Free. (4930)

KINETIC STUDIES OF THE WOOL-WATER SYSTEM. PART 3. MECHANISM OF SORPTION AT HIGH WATER CONCENTRATIONS. I. C. Watt and J. E. Algie (C.S.I.R.O. Wool Research Labs.). Textile Research J. 31: 793–799 (Sept. 1961).
More data on the sorption behavior for keratin fibers with a high initial or final water content are presented, and the complex nature of both absorption to, and desorption from, high water concentrations within the fibers is discussed. 15 refs. (4931)

AN ECONOMIC ANALYSIS OF THE EFFECTS OF ALTERNATIVE SHEARING METHODS ON WOOL QUALITY IN EASTERN SOUTH DAKOTA. G. E. Marousek. Agri. Experiment Station, South Dakota State Coll., Brookings, S. D. Mar. 1961. 174 p. Agricultural economics pamphlet no. 110. Free. (4932)

LANTHIONINE FORMATION IN KERATIN. C. Earland and D. J. Raven (Bradford Inst. Technol.). (Letter to the editor). Nature 191: 384 (July 22, 1961).
Supporting evidence for the β-elimination mechanism of lanthionine formation in wool keratin, and against mechanisms which involve formation by direct attack on the α-carbon atom is presented. (4933)

FAULTY AND DAMAGED WOOLS. H. Koch. Textil-Praxis 16: 451–453 (1961). In German. Through J. Textile Inst. 52: A461 (1961).
A list is given of 20 faults occurring in raw wool, with brief descriptions of each. (4934)

Manmade fibers A2

UTILIZATION OF CHITIN FOR THE PRODUCTION OF ARTIFICIAL FIBERS. B. Chi-Min. Khim. Volok. No. 3: 39–41 (1960). In Russian. Through BCIRA 41: 2707 (1961).
After explaining how chitin and chitosan are obtained, the author describes the preparation of chitosan fiber and partially-hydrolyzed chitin fiber. The latter is used as an ion-exchange material. (4935)

NELSONS FLAME-RESISTANT ACETATE YARN. Textile Weekly 61 (2): 363, 370 (Aug. 18, 1961).
The flameproof yarns are produced from fibers which have been internally modified in a manner to render them flame-resistant, and this flame-resistance is claimed to be unimpaired by any normal means of cleaning or washing, or by wear. The general physical properties of the yarn are described as indistinguishable from those of standard acetate yarns. (4936)

NATURAL POLYMER MANMADE FIBERS. C. Z. Carroll-Porczynski. National Trade Press, Ltd, London. 1960. 303 p. $7.70 [approx.].
Contents: History and development; Regenerated cellulose fibers: viscose rayon, modified viscose fibers, high-tenacity viscose rayons, applications of viscose staple fibers, applications of high-tenacity viscose rayon filaments, cuprammonium rayon; Cellulose ester fibers: cellulose acetate, modified acetate fibers, specialty acetate yarns, applications of cellulose acetate fibers, cellulose triacetate; Regenerated protein fibers: casein fibers, Ardil, zein fibers; Miscellaneous natural polymer fibers: alginate fibers, rubber yarns and fibers, conversion of rubber threads into fabrics, uses of rubber threads and fibers. References. (4937)

MODIFICATION OF THE PHYSICO-CHEMICAL PROPERTIES OF CELLULOSE TRIACETATE BY THE INCLUSION METHOD. A. N. Bykov. Khim. Volok. No. 3: 37-39 (1960). In Russian. Through BCIRA 41: 2755 (1961).
The solubility and sorption properties of cellulose triacetate fiber containing included benzene are greatly improved compared with those of the untreated fiber. This paper reports studies of the properties of inclusion cellulose triacetates, namely: the effect of preliminary swelling treatments on the solubility, acetone sorption, and dye sorption of cellulose triacetate and its inclusion and de-inclusion forms; the kinetics of the sorption of acetone by inclusion and de-inclusion cellulose triacetate; and the kinetics of the dissolution of inclusion cellulose triacetate in a solvent. (4938)

CHANGE OF BIREFRINGENCE SIGN, DENSITY, AND OPACITY OF AN ACRYLIC FIBER. K. Koyano and H. Nagao (Teikoku Rayon Co.). Kolloid Z. 177, No. 1: 30-35 (July 1961).
An acrylic fiber made by dry-spinning of dimethylformamide solution was stretched in various media, in soybean oil, water, superheated water vapor, hot air, and ethyleneglycol. The birefringence and density of the stretched fiber were measured, and the relation between these and the opacity of the fiber was investigated. 17 refs. (4939)

FIBERS TODAY. PART 11. OTHER REGENERATED FIBERS. J. W. S. Hearle. Textile Mfr. 87: 310-311 (Aug. 1961).
Production and properties of calcium alginate and regenerated protein fibers and their uses and limitations in woven, knitted, and felted constructions are discussed. (4940)

CERAMIC FIBER: SEVEN FORMS AND HOW TO USE THEM. C. B. Walworth. Textile Mfr. 87: 315-316, 319 (Aug. 1961). (4941)

IMPROVED TEFLON FOR PUMP PACKING. E. I. du Pont de Nemours & Co. Daily News Record No. 183: 21 (Sept. 20, 1961).
Improved performance is attributed to the complete removal of all carbonaceous material from the Teflon TFE fiber by bleaching and preshrinking the fiber prior to braiding. (4942)

ROCKET MOTOR CASES OF FILAMENT GLASS. Daily News Record No. 179: 28, 31 (Sept. 14, 1961).
The growing use of glass filaments for rocket motor cases, and its potential use as a replacement for metal in other high pressure structures, e.g. submarines, torpedos, airborne antennas and radomes, propellent tanks, etc., are described. (4943)

RAISING THE THERMAL STABILITY OF POLYAMIDES BY MEANS OF THE INTRODUCTION OF SMALL ADDITIONS OF INORGANIC SUBSTANCES. Y. A. Voitelev and N. D. Katorzhnov. Khim. Volok. No. 3: 3-6 (1960). In Russian. Through BCIRA 41: 2770 (1961). (4944)

VARIABILITY OF THE SUBMICROSCOPIC STRUCTURE AND MECHANICAL PROPERTIES OF POLYCAPROLACTAM FIBER. T. Zhilinskii. Technol. Textile Ind. USSR No. 1 (14): 18-34 (1960).
Results of studies on the influence of cold drawing and heat-setting on the structural parameters and mechanical properties of polycaprolactam fibers are summarized. 23 refs. (4945)

JAPANESE POLYAZINE FIBER. A. Okada. Daily News Record No. 173: 34 (Sept. 6, 1961).
The polyazine fiber is produced by polymerizing isocinchomeronic acid, hexamethylenediamine, and adipic acid. Properties are noted. (4946)

EFFECT OF PHYSICAL TREATMENTS ON THE STABILITY OF POLYAMIDES. M. M. Epstein and C. W. Hamilton. Modern Plastics 38: 113-114, 119-122, 176-177 (Aug. 1961).
Combining the proper physical treatment (quenching and drawing) with the proper additive results in a major improvement in the stability of nylon filaments to weathering. 10 refs. (4947)

WHAT PRICE POLYPROP? J. B. Goldberg. Textile Inds. 125: 117-118 (Sept. 1961).
In this down-to-earth analysis of the cost picture on polypropylene fiber production the following are considered: raw materials, extrusion and fiber production, capital investment, research, and promotion. (4948)

INVESTIGATION OF THE POSSIBILITY OF RAISING THE THERMAL STABILITY OF POLYOLEFINE FIBERS BY THE ACTION OF IONIZING RADIATION. S. A. Nechaeva, Y. M. Malinskii, and Z. A. Rogovin. Khim. Volok. No. 3: 7-9 (1960). In Russian. Through BCIRA 41: 2771 (1961).
Irradiation of polypropylene fibers, by gamma radiation from cobalt 60, markedly reduces their shrinkage at high temperatures, but has an adverse affect on their mechanical properties. Irradiation also improves the thermal stability of polyethylene fibers, but fails to prevent the strength loss which occurs with rising temperature. (4949)

TERYLENE POLYESTER FIBER AND ITS APPLICATION IN THE RUBBER INDUSTRY. J. S. Little (Can. Inds. Ltd). Can. Textile J. 78: 57-65 (Sept. 15, 1961).
The suitability of Terylene for use in V-belts, conveyor belts, and tire cords is examined by presenting data on how well it fulfills the following requirements: load-extension and stress-strain properties; heat and chemical resistance; dimensional stability; and rubber adhesion. (4950)

ESTABLISHMENT OF NORMS FOR CENTRIFUGAL SPINNING MACHINES IN THE VISCOSE FIBER INDUSTRY. E. V. Zernov. Technol. Textile Ind. USSR No. 1 (14): 8-17 (1960).
Formulas are given for establishing norms for machine and operative productivity and for determining machine and operative efficiency in accordance with the calculated norms. (4951)

MOLECULAR BASIS OUTLINED FOR ZANTREL PROPERTIES. C. E. Coke (Hartford Fibres Co.). Daily News Record No. 175: 28 (Sept. 8, 1961). (4952)

IODINE REACTION OF POLYVINYL ALCOHOL SOLUTION AND OF FIBERS AND FILMS BASED ON IT. L. A. Volf and A. I. Meos. Khim. Volok. No. 3: 21-22 (1960). In Russian. Through BCIRA 41: 2710 (1961).
The reaction between iodine and polyvinyl alcohol solutions is discussed. Fibers and films containing iodine can be prepared by extruding polyvinyl alcohol into a coagulating bath containing a mixture of iodine and potassium iodide. Such products have useful bacteriostatic properties. (4953)

YARN PRODUCTION B

CARDING-SPINNING MACHINERY IN THE NEXT DECADE. G. C. Anderson (Saco-Lowell Shops). Textile Inds. 125: 119-122 (Sept. 1961).
Future trends in process elimination, increased package size, machine speed, and automation are discussed. (4954)

IF IT DOESN'T ADD TO YARN QUALITY--DROP IT. C. Eastwood. Textile Bull. 87: 59-60 (Sept. 1961).
The processes currently in use in carded yarn mills --opening and picking, carding, breaker and finisher drawing, roving, and spinning--are examined to determine what each adds to yarn quality and appearance and which of them could be potentially eliminated in an automated system. (4955)

SEMI-WORSTED SPINNING SYSTEM. J. Kinapenne. Melliand Textilber. 42: 613-618 (1961). In German. Through J. Textile Inst. 52: A423 (1961).
When coarse counts are to be spun from fibers of long staple, e.g. carpet yarns from crossbred wools or synthetic fibers, the semi-worsted system offers a cheap alternative to woolen spinning. The yarn produced on it is smoother than a worsted yarn, but contains more short fiber, has less twist, and is bulkier than a woolen yarn. The production stages are carding, two or three stages of gilling, and spinning on a high-draft woolen ring frame. A table showing machine settings for production rates of 50 and 67 kg/hr at counts between 1,000 and 56 tex is given. (4956)

EFFECT OF DOUBLINGS IN WORSTED SPINNING. E. Honegger and R. Karm. Bull. Inst. Textile France No. 91: 73-98 (1960). In French. Textil-Praxis 16: 109-117 (1961). In German. Through J. Textile Inst. 52: A242 (1961).
The statistical theory of the irregularity of slivers, rovings and yarns is discussed. Machinery for preparing and spinning worsted yarn on the French system was examined under industrial conditions. (4957)

INVESTIGATION OF GUIDE MECHANISMS FOR THREAD MOVEMENT DURING CONTINUOUS PROCESSING OF FILAMENT YARNS. A. F. Proshkov. Technol. Textile Ind. USSR No. 1 (14): 154-166 (1960).
See abstr. 3904/60. (4958)

FIBER BLENDING FOR WOOLEN YARN. PART 5. L. Bellwood. Wool Rev. 35: 37 (Aug. 1961).
Wool fibers recovered from various classes of materials, their grading, and their blending for reuse are described. (4959)

WORK FLOW IN WOOL COMBING. J. Unger. Textil-Praxis 16: 16-21 (1961). In German. Through J. Textile Inst. 52: A303 (1961).
The theoretical ideal of a sequence of single, mechanically-linked machines being impracticable as yet, a compromise is suggested based on three units linked by accumulating-transporting systems. The first unit is a carding-drawing unit. In this, each card is followed by a fiber-parallelizing machine, and the products of a number of these are put through a single autoleveler. The second unit is a combing-drawing unit, the output from a number of combs being put through another autoleveler. Finally there is a backwashing-gilling unit, the backwasher feeding directly into three autolevelers. (4960)

COMBING AND SPINNING COURTELLE FIBERS USING STANDARD BRADFORD EQUIPMENT. K. S. Butterfield. Textile Mfr. 87: 305-309 (Aug. 1961).
Processing details and machine settings for carding, gilling, combing, drawing, twisting, spinning, and winding based on two years mill experience. (4961)

HUMIDIFICATION IN COTTON SPINNING MILLS. S. K. Ghosh (Bangeswari Cotton Mills Ltd). Textile J. Australia 36: 681-684, 689 (June 20, 1961).
Optimum humidity conditions for opening, carding, combing, drawing, roving, and spinning, and methods of achieving them are discussed. (4962)

WHAT HAPPENS TO PRODUCT QUALITY WHEN COTTON BLENDS VARY IN THEIR FLAT BUNDLE STRENGTHS? J. E. Sands, L. A. Fiori, and G. L. Louis (So. Reg. Research Lab.). Textile Bull. 87: 45-50 (Sept. 1961).
The effects of blending cotton differing in fiber bundle strength on yarn and fabric quality are reported. Cotton fiber bundle strength was found to be related to: (1) proportion of weak and strong fiber cottons; (2) strength of yarns spun from them; (3) warp strip breaking strength in the gray; scoured; bleached; bleached, mercerized, and dyed; and bleached, mercerized, dyed, and resin-treated states; (4) filling strip breaking strength in all but the bleached, mercerized, dyed, and resin-treated states. Results of grab test indicated somewhat similar trends, while flex abrasion was not affected. 8 refs. (4963)

LUBRICATION OF POLYMERS. C. Rubenstein (Shirley Inst.). J. Appl. Phys. 32: 1445-1450 (Aug. 1961).
Previous work on the lubrication of polymers is reviewed, and the explanations which have been advanced are examined and are shown to be inadequate. An alternative mechanism of polymer lubrication is proposed which is based on the hypothesis that when a lubricant is applied to a polymer it is possible for the lubricant molecules to penetrate the polymer and alter its mechanical properties. An investigation into the lubrication behavior of textile polymers is described, and an explanation of the results of this and other investigations is offered in terms of the proposed mechanism. 33 refs. (4964)

STUDY OF COTTON/VISCOSE RAYON STAPLE FIBER BLENDS. N. Devillers, G. Messien, G. Mazingue, and M. van Overbeke. Bull. Inst. Textile France No. 91: 7-25 (Nov./Dec. 1960). In French. Through BCIRA 41: 2723 (1961).
Studies were made of the fiber distribution in blends of 85%-15% cotton-viscose staple fiber with a view to establishing the efficiency of official Government Sampling methods. It was found that great variations can occur in any given sample. (4965)

FIBER BLENDING ON THE WORSTED SYSTEM. J. Ingham (Wool Inds. Research Assoc.). Textile Merc. 144: 476-477 (Apr. 7, 1961).
The principles of color blending, as applied to the blending of wool and manmade fibers, are outlined. (4966)

ROLE OF FIBER LUBRICANTS. E. Rhodes. Textile Merc. 144: 469-471, 482 (Apr. 7, 1961).
A report on mill trials with Briggs TN6/6 fiber lubricant for wool carpet yarns. (4967)

PROBLEM OF SELECTING THE MOST EFFICIENT DRAFTING MECHANISMS FOR THE COTTON-SPINNING INDUSTRY. M. F. Belov. Technol. Textile Ind. USSR No. 1 (14): 178-181 (1960).
Report of conference held in Moscow, Nov. 25-28, 1959. (4968)

STATISTICAL METHODS CAN HELP REDUCE NEPS. N. L. Enrick. Textile Bull. 87: 39-40 (Sept. 1961).
Case histories of the application of statistical methods to the analysis of routinely accumulated testing data and the resultant reduction in nep count are presented. (4969)

Carding and combing B2

GOLDEN CIRCLE HALF LAP IMPROVES SUPER J COMBER EFFICIENCY. Whitin Mach. Works. Whitin Rev. 28: 46-47 (July 1961).
In the new half lap a single piece aluminum core containing accurately milled slots holds the needle bars in exact position. The preformed needle bars are cemented into their proper slots and automatically assume the correct angle and height. By means of a simple fixture, a single needle bar can be removed from its slot in the half lap core, and a new bar, with needles in place, is cemented in position. (4970)

HARTFORD COMBERS. Platts Bull. 9, No. 12: 392-394 (1961).
Results typical of those obtained in actual mill production with Hartford 6 and 8 head combers are tabulated. (4971)

EFFECT OF SPEED AND SETTING OF THE FOUR WORKERS OF THE FIRST PART OF THE CARD ON THE TOTAL NUMBER OF COLLECTIONS. F. Monfort and J. Brach. Ann. Sci. Textiles Belges No. 4: 49-91 (1960). Through J. Textile Inst. 52: A145 (1961). In French.
This is the third part of a study of the setting of the worsted card. Factorial tests were used to establish regression equations between the instantaneous loadings of the 4 carding points and the 9 variables (feed, speeds, and settings of the workers), the speed of the swift being fixed. The results obtained on Buenos-Aires wool processed on the Houget card used for the previous parts of the study confirmed the validity of the mathematical models chosen. See also abstr. 1895/61. (4972)

SWIFT DUOCARD KEY TO BETTER COTTON CARDING. Swift Spinning Mills. Am. Textile Reptr. 75: 9-11, 43-44 (Sept. 21, 1961).
The DuoCard system is effected by connecting two conventional cards in a tandem arrangement whereby the carded fibers of the first card are continuously transferred to a second cylinder. The front section of one card up to the doffer is removed and the lickerin on the second card is replaced by a doffer. Advantages are cited. (4973)

DUOCARD SYSTEM. Swift Spinning Mills. Daily News Record No. 176: 28 (Sept. 11, 1961). Southern Textile News No. 36 : 9, 10 (Sept. 16, 1961). (4974)

CONVEX SHAPE FEED TABLE FOR COTTON CARDING MACHINES. L. I. Karpov. Technol. Textile Ind. USSR No. 1 (14): 78-87 (1960).
See abstr. 3876/60. (4975)

Drawing and roving B3

EQUATIONS FOR THE ATTENUATION CURVE OBTAINED DURING UNSTABLE CONDITIONS OF OPERATION OF THE DRAWFRAME. A. G. Sevost'yanov. Technol. Textile Ind. USSR No. 1 (14): 52-65 (1960).
See abstr. 3881/60. (4976)

SINGLE ZONE DRAFTING AT THE SPEED FRAME. Platt Bros. Ltd. Platts Bull. 9, No. 12: 384-391 (1961).
The reasons for and advantages of 3-over-3 single zone drafting systems are discussed. Specifications and operating results are included. (4977)

WHITIN MODEL M7 DRAWING FRAME. Whitin Mach. Works. Whitin Rev. 28: 37-39 (July 1961). (4978)

ARRANGEMENT OF FIBERS IN CARD SLIVERS AND ITS INFLUENCE ON LATER PROCESSES. W. Nutter. Bull. Inst. Textile France No. 91: 45-71 (Nov./Dec. 1960). In French. Through BCIRA 41: 2724 (1961).
The author of this lecture surveys work done previously and presents graphs and tables from his own experiments which demonstrate that drawframe roller settings should be related to the true length of the fiber in the sliver rather than to the staple length. The possibility of shortening the spinning process is investigated; it is shown that the degree of parallelism of the fibers in the card sliver is an important limiting factor. (4979)

NEW DRAFT CONTROL DEVICE. Sant'Andrea. Melliand Textilber 42: 3-7 (Jan. 1961). In German. Through J. Textile Inst. 52: A358 (1961).
A new autoleveling device is described that can be attached to the firm's intersecting gill box model SD. Detection of sliver irregularity is effected by a disc-and-groove method; the memory device consists of a wheel with 60 rods; controlling speed-variation is imparted to the draft rollers via a planetary gear. Variations of wavelength greater than 29 mm and between ± 15% and -20% in magnitude can be corrected; a stop motion operates if larger irregularities occur. (4980)

COHESION PHENOMENA IN COMBED WOOL SLIVERS. A. Barella. Bull. Inst. Textile France No. 89: 79-96 (1960). Through J. Textile Inst. 52: A24 (1961).
Minimum twist to provide cohesion was determined by using a technique based on the use of a modified form of a yarn twist counter. The minimum twist increased with tension applied, and decreased with increasing specimen length for given tension. The results are compared with those of other investigators. In French. (4981)

INVESTIGATION OF THE PARAMETERS OF THE WINDING PROCESS ON FLYERS WHEN PROCESSING VISCOSE STAPLE FIBERS. Z. M. Orlova. Technol. Textile Ind. USSR No. 1 (14): 66-77 (1960).
See abstr. 3878/60. (4982)

APRON TYPE DRAFTING SYSTEMS: DEVELOPMENT AND PRESENT STATUS. B. Zalkind (Saco-Lowell Shops). Fibre and Fabric 114: 4-6 (Aug. 1961). (4983)

MODERN SYSTEMS OF WORSTED DRAWING. PART 1. H. Needham and W. Parkin. Wool Rev. 35: 14-15 (Aug. 1961).
Details of the American system consisting of 3 pin-drafters followed by a high-draft cone rover, and sets which include gill rovers or high- or low-draft rubbing draw boxes as the final operation are described. 11 refs. (4984)

Spinning, winding, twisting B4

HIGH SPEED WOOLEN SPINNING. Platt Bros. Ltd. Platts Bull. 9, No. 12: 395-401 (1961).
Brief specifications of MWR3, 4, and 5 woolen ring frames. (4985)

SPINSAVAC BROKEN END COLLECTION FOR RING FRAMES. Platt Bros. Ltd. Platts Bull. 9, No. 12: 402-404 (1961).
Features of the SpinSaVac systems for cotton and woolen ring frames are outlined. (4986)

FACTORS AFFECTING SPINNING PERFORMANCE. Platt Bros. Ltd. Platts Bull. 9, No. 12: 374-383 (1961).
This article discusses the effects on spinning performance of the geometry of the ring frame; in other words the influence of the variables in the thread path from the front roller delivery point to the bobbin. These variables are lift, ring diameter, control ring system (if fitted), guide eye position, angle of thread from the front rollers to the guide eye, and roller stand angle. (4987)

AUDOMAC DOFFER SYSTEM. Whitin Mach. Works. Whitin Rev. 28: 22-36 (July 1961).
Word and picture story on operational sequence of Audomac automatic doffing system for spinning frames. (4988)

DUALUBE SPINNING RINGS FOR USE WITH CENTRALIZED PRESSURE LUBRICANT SYSTEMS. Whitinsville Spinning Ring Co. Southern Textile News No. 38: 7 (Sept. 30, 1961). (4989)

BEHAVIOR OF DOGGY AND NORMAL WOOL IN WORSTED SPINNING USING THE AMBLER SUPERDRAFT METHOD. T. Carter, W. R. Lang, and R. B. Sweetten (Gordon Inst. Technol.). (Letter to the editor). J. Textile Inst. 52: T390-T392 (Aug. 1961).
Since doggy wool tends to have a straighter fiber form than the normally crimped growth, the relative response of normal and doggy wools to Ambler Superdraft (A.S.D.) ring spinning on the one hand, and the conventional tumbler and carrier (cap) method of Bradford spinning, on the other, was investigated. In A.S.D. spinning the doggy wool performed consistently better than the normal. In conventional (cap) spinning, the performance near the spinning limit was completely reversed. (4990)

INFLUENCE OF TWIST ON THE PHYSICAL AND MECHANICAL PROPERTIES OF ACETATE YARNS. V. A. Usenko and K. N. Murav'eva. Technol. Textile Ind. USSR No. 1 (14): 35-43 (1960).
See abstr. 3885/60. (4991)

OPTIMUM PARAMETERS FOR PROCESSING WOOL/VISCOSE BLENDS ON RING SPINNING FRAMES EQUIPPED WITH THE TSNIISHERSTI DRAFTING MECHANISM. C. T'I-Ch'eng. Technol. Textile Ind. USSR No. 1 (14): 88-96 (1960).
A formula for calculating the optimum degree of draft on the basis of fiber length is derived. Results of spinning trials on wool/viscose blends show good correlation with the theoretical approach used. In addition, to eliminate the dead space in the rear zone, it is recommended that a light additional porcupine be fitted in the section between the feed rollers and the comb, and that pins of two different working heights, arranged diagonally, be used on the porcupine. Such measures were found particularly effective in processing nonuniform blends on a machine with a comb of small diameter. 6 refs. (4992)

Yarns B5

THICK-AND-THIN YARNS OF ORLON SAYELLE. C. Reichman. Knitted Outerwear Times 30: 3 (Sept. 18, 1961).
The Orlon Sayelle thick-and-thin yarns are manufactured on the Bradford system of spinning. The basis of the yarn bundle is worsted roving which, through a process of intermittent spinning, is transformed into the unconventional thick-and-thin yarn resembling the slub-type yarn normally produced on fancy uptwisting machinery. A less bulky variety of yarn can be turned out by twisting one end of roving with an end of single ply spun yarn. (4993)

STUDY ON THE STRUCTURE OF BLENDED YARNS. PART 11. NEW ROVING TESTER AND THE WITHDRAWAL FORCE OF BLENDED ROVINGS OF COTTON AND RAYON STAPLE FIBERS. S. Ueno and K. Kuwabara. J. Soc. Textile Cellulose Inds. Japan 17, No. 5: 383-389 (1961). In Japanese (English summary). Through BCIRA 41: 2725 (1961).
The strength-elongation curves of the yarns are related to the withdrawal forces of the rovings: up to the maximum withdrawal force the relation is linear and no stick-slip phenomena are observed. (4994)

SHIPPING INFORMATION: HIGH TENACITY NYLON FILAMENT YARNS. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Aug. 1961. 6 p. Bull. N-144 (replaces Bull. N-117). Free. (4995)

FINE PAPER YARN FOR SHEER FABRICS IN THE MILLINERY INDUSTRY. Sackner Prods. Daily News Record No. 178: 40 (Sept. 13, 1961); No. 183: 18 (Sept. 20, 1961).
Uniform lightweight papers are slit with high speed knives and twisted, beamed, woven, and finished. (4996)

TERYLENE BULKED YARNS. C. S. Bruce (Imp. Chem. Inds. Ltd). J. Textile Inst. 52: P371-P397 (Aug. 1961).
This paper describes the production of stuffer-box crimped Ban-Lon, stabilized false-twist Crimplene, and air-textured Taslan yarns from Terylene, their properties, and uses. (4997)

NEW SLUB YARN TECHNIQUE. Courtaulds Ltd. Daily News Record No. 176: 26 (Sept. 11, 1961).
Random slub insertion during the spinning process is claimed by means of a modification to spinning machines. (4998)

TECHNOLOGY OF THE PRODUCTION OF FALSE-TWIST TEXTURED YARNS. M. S. Burnip, J. W. S. Hearle, and G. R. Wray (Manchester Coll. Sci. & Technol.). J. Textile Inst. 52: P343-P370 (Aug. 1961).
Experimental work in the production of false-twist textured yarns using a versatile apparatus is described. Measurements of tension are made at various stages of the process on two systems using different methods of feeding the yarn. The distribution of twist throughout the set-up is discussed. Some measurements of tension are also made on yarns given a simple thermal treatment only. Yarns have been made at a wide range of tensions, twists, and temperatures and are compared in terms of their visual appearance, breaking load and breaking extension, residual shrinkage, stretch, recovery behavior, specific volume and change in denier on processing. (4999)

ENGINEERING SCENE IN THE FIELD OF BULKED YARNS, 1961. W. Wynne-Owen (Brit. Nylon Spinners Ltd). J. Textile Inst. 52: P398-P410 (Aug. 1961).
This paper briefly surveys bulking machinery, mainly of the false-twist type, then goes on to examine the main engineering requirements of machines of this sort. Some examples of the difficulties met with in producing machinery for bulking yarns are discussed. Finally, an attempt is made to look into the future with particular reference to the nature of the collective effort which the future will demand. (5000)

ELONGATION STRAINS IN VISCOSE FIBERS. E. M. Mogilevskii, G. G. Finger, and O. G. Khorkova. Khim. Volok. No. 3: 41-43 (1960). In Russian. Through BCIRA 41: 2793 (1961).
The load/extension properties of viscose rayon yarn, prepared by box-spinning and continuous process, have been compared. Breaking length and elongation measurements were made on dry and wet yarns, both before and after shrinking, and in the case of yarn on cakes, yarn specimens were taken from the outer, middle, and inner layers of the cake. Yarns produced by the two spinning methods can be distinguished by their different degrees of nonreversible strain after stretching. (5001)

MECHANICAL PROPERTIES OF KAPRON CORD AT HIGH TEMPERATURES. Z. I. Suleimanova. Khim. Volok. No. 3: 23-24 (1960). In Russian. Through BCIRA 41: 2803 (1961).
The effect of high temperatures (up to 150° C) on the breaking strength and extension of Kapron cord yarn has been studied. (5002)

HEAT SHRINKAGE TENSIONS OF NYLON TIRE CORD. W. S. Symes (Brit. Nylon Spinners Ltd). (Letter to the editor). Textile Research J. 31: 827 (Sept. 1961). (5003)

STUDY OF THE GEOMETRICAL STRUCTURE OF MULTI-PLY YARNS. G. Riding (Shirley Inst.). J. Textile Inst. 52: T366-T381 (Aug. 1961).
Several experimental techniques of obtaining data such as retraction, folding angles, and outer filament angles as functions of the cording twist are discussed in detail. It is shown that realistic results are obtained only when cords are individually made and that measurements of length and angle made during the twisting or untwisting of a short length of cord (e.g. as in a twist tester) are meaningless. The distortion of the shape of the ply cross-section is discussed and illustrated for two-, three-, and seven-fold cords. These experimental aspects are taken into account when comparing the results with those calculated on the basis of Treloar's theory. 4 refs. (5004)

SOME OF THE ADVANTAGES OF INTEGRATING BULKED SYNTHETIC FILAMENT YARNS INTO THE CZECHOSLOVAK TEXTILE INDUSTRY AND ECONOMY. J. Houska, B. Piller, and Z. Trávnicek. J. Textile Inst. 52: P411-P424 (Aug. 1961).
Yarn bulking methods have been studied and their economic and social implications, as well as their impact on the development and investment policy of the textile industry, investigated. An integrated program of research, development, processing, and application resulting from the investigations is described. A list of references to publications in Czechoslovakian and other European journals, as well as in English periodicals, dealing with the points raised in the paper is included. (5005)

FABRIC PRODUCTION C

Warping, slashing, yarn preparation C1

TECHNICAL PRINCIPLES AND USE OF MEASURING AND CONTROL DEVICES. PART 6. SIZING MACHINE. A. de Groot. Tex 20, No. 3: 106-110 (1961). Rev. Textilis 17, No. 4: 49-56 (1961). In Dutch. Through BCIRA 41: 2734 (1961).
With reference to the new sizing machine of Tattersall & Holdsworth (Enschede), the author describes the means for controlling the temperature in the size box, the level of the size in the box, and the temperature in the drying section. (5006)

INFLUENCE OF GUIDING DEVICES ON THE TENSION OF A MOVING THREAD. E. D. Efremov. Technol. Textile Ind. USSR No. 1 (14): 97-108 (1960).
See abstr. 3901/60. 3 refs. (5007)

INVESTIGATION OF TENSIONERS FOR FAST-RUNNING THREADS. E. A. Onikov. Technol. Textile Ind. USSR No. 1 (14): 109-118 (1960).
See abstr. 3903/60. (5008)

SPEED CAPACITY OF DISC-TYPE THREAD TENSIONING DEVICES. V. V. Strzhalkovskaya and E. D. Efremov. Technol. Textile Ind. USSR No. 1 (14): 119-125 (1960).
See abstr. 3902/60. 3 refs. (5009)

SCHLAFHORST AUTOCONER. Dyer 126: 259-265 (Aug. 25, 1961).
Summary of lecture delivered at Bolton Technical College on the operation of the autoconer. (5010)

GILBOS CONE AND CHEESE WINDERS. Textile Weekly 61 (2): 466 (Sept. 1, 1961).
Features of the Gilbos UC and RCN winders are briefly noted. (5011)

WINDING PRODUCTIVITY UP 100%. Textile World 111: 120-122 (Sept. 1961).
Word and picture story on mill operation of Foster 506 high speed winder. (5012)

Weaving C2

DEVELOPMENT OF LOOMS. PART 4. T. B. Vaswani. Silk Rayon Inds. India 4: 11-12, 22-23 (May 1961).
Historical survey of loom development. (5013)

LOOMFIXER AND HIS JOB. PART 32. W. Westbrook. Textile Bull. 87: 67 (Sept. 1961).
Advantages of a loom overhaul program are cited. (5014)

AIDS TO THE LOOMFIXER. Fibre and Fabric 114: 12 (Aug. 1961).
Adjustment procedures for use with the Diehl transmitter brake on Draper X-2, XP-2, XD, and XP looms are outlined. (5015)

GAGES IN DRAPER LOOM MAINTENANCE. PART 11. KEEPING THE TRANSFER MOTION WORKING CORRECTLY. Textile Inds. 125: 112-114 (Sept. 1961). (5016)

THEORETICAL BASIS FOR REPLACING PROFILED LAY SWORDS WITH TUBULAR LAY SWORDS. S. P. Vostroknutov. Technol. Textile Ind. USSR No. 1 (14): 167-172 (1960).
From a theoretical analysis of the functioning of loom lay swords, it is concluded that the replacement of profile metal lay swords by tubular metal swords reduces deflection of the lay, improves the efficiency and quality of work of the loom, and at the same time reduces the expenditure of materials on the manufacture of the swords. 3 refs. (5017)

ITALIAN SHUTTLELESS LOOM. Soc. Macchine Industria Tessile. Daily News Record No. 196: 38 (Oct. 9, 1961).
The loom employs two rapiers, one from each side, which exchange the filling at the center of the loom. It is claimed to work with odd picks up to 8 colors. (5018)

SHUTTLELESS LOOM FROM SPAIN. Maquinaria Textil del Norte de Espana SA. Daily News Record No. 186: 30 (Sept. 25, 1961).
The loom utilizes a rapierlike filling insertion mechanism and for fancy work, up to 8 filling colors with automatic selection is determined by a special design setup in a special dobby head. (5019)

NEWSPED BLANKET LOOM. Newsome & Spedding Ltd. Daily News Record No. 186: 33 (Sept. 25, 1961).
The Newsped loom utilizes the rapier principle of filling insertion. The warp is fed in traditional manner, but the filling is fed by means of a needle-tipped rapier from large cheeses. At each side of the loom, small steel shuttles weave a firm cotton selvage. (5020)

NEWSPED BLANKET LOOM. Newsome & Spedding Ltd. Wool Record 98: 1533 (1960). Through J. Textile Inst. 52: A96 (1961).
The loom is of the rapier type and inserts four threads per pick at 30 picks/min. Small auxiliary shuttles situated at both sides of the loom operate to produce firm selvages. The cloth produced, having a lean warp and a predominance of weft, raises easily. (5021)

LOOM DEVELOPMENTS IN MOQUETTE, PLUSH, AND CARPET WEAVING. I. S. Porter (Wilson & Longbottom Ltd). Textile Merc. 144: 229-234 (Feb. 17, 1961).
See also abstr. 2422/61. (5022)

Knitting C3

STOP WASTING YOUR ELECTRICAL DOLLAR. E. W. Fair. Knitter 25: 50-51 (Aug. 1961).
Suggestions for reducing electrical energy costs in knitting mills. (5023)

SOLID COLOR ARGYLE DIAMOND PATTERNS. H. Wignall. Hosiery Trade J. 68: 186 (Sept. 1961).
The contrast between hand and mechanical patterning in cost and quality is pointed out, and automatic patterning methods are outlined. (5024)

PROCESSING LYCRA SPANDEX FIBER HOSIERY. H. White. Hosiery and Underwear 44: 48, 50 (Aug. 1961).
Recommended scouring, dyeing, and bleaching procedures for Lycra support hose are briefly outlined. (5025)

FOUR-FEED SENTIMENT ROUNDUP. Textile Inds. 125: 138-140, 142 (Sept. 1961).
Survey of current industry reaction indicates a far from favorable reaction to this so-called "disposable" hosiery due to inferior quality. (5026)

QUARTEX FN FOUR-FEED, FOUR-COLOR SINGLE CYLINDER CIRCULAR HALF-HOSE MACHINE. Fabrique Nationale. Hosiery Times 34: 50 (Aug. 1961). (5027)

AUTOMATION IN THE HOSIERY TRADE: DOWNSTREAM CONVEYOR UNIT FOR SEAMLESS NYLONS. R. W. Mills. Hosiery Times 34: 14-16 (Aug. 1961). Hosiery Trade J. 68: 122-124 (Sept. 1961).
With the Downstream conveyor unit (developed by Meccanica del Nord) 60 twin-feed machines can be served, exact control and a counter mechanism giving production figures for each machine individually. Stockings are automatically reversed and deposited into trays according to size, and each machine can be instantaneously stopped if a faulty stocking is spotted by the inspector, the stocking being returned via an alternative trunk line. (5028)

HATRA HOSEXTENDER FOR FULL-FASHIONED HOSIERY. F. C. Livingstone. Knitter 25: 45, 63-64 (Aug. 1961).
See abstr. 4860/60. (5029)

BANCROFT BAN-LON STITCH COUNT STANDARDS. C. Reichman. Knitted Outerwear Times 30: 3-5, 24 (Sept. 4, 1961).
The latest Bancroft standards establish entirely new minimum stitch counts for girls' and infants' sweaters, boys' sweaters and sweater-shirts, ladies' sweaters and men's sweaters and knit shirts of interlock and full-fashioned jersey construction. The higher basic stitch counts for these various categories along with the previous stitch count requirements are tabulated. (5030)

TERROT RMR YARDGOODS MACHINE. C. Terrot Sohne. Knitted Outerwear Times 30: 47-49 (Sept. 11, 1961).
The RMR circular jacquard machine is a multifeed latch needle unit with a revolving dial and cylinder and pattern wheels at each feed acting on the needles in the cylinder. Features and patterning possibilities are covered. (5031)

PRIMER ON KNIT SHIRT TYPES AND HOW THEY'RE MADE. C. Reichman. Knitted Outerwear Times 30: 7-9, 80-81 (Sept. 11, 1961).
The two basic types of knit shirts, sweater-shirts and cut-and-sew shirts are defined and manufacturing techniques are described. (5032)

FUNDAMENTALS OF WARP KNIT ENGINEERING. PART 13. A. Reisfeld (Gehring Textiles). Knitted Outerwear Times 30: 5-7, 33 (Sept. 18, 1961).
The preparation, application, and range of worsted yarns for use in warp knitting are discussed. 12 refs. (5033)

STRESSES IN A PLAIN-KNITTED LOOP. G. A. V. Leaf (Hosiery & Allied Trades Research Assoc.). J. Textile Inst. 52: T351-T365 (Aug. 1961).
Some possible stress-distributions in a model of a dry relaxed plain-knitted loop are investigated, the fabric being assumed to lie in a horizontal plane. In particular, the forces and couples applied by one loop to its neighbor at the points where they interlock are discussed, and estimates of their magnitude are given. 4 refs. (5034)

BENZ COORDINATE INSTRUMENT FOR FULL-FASHIONED COURSE-WALE READINGS. Knitted Outerwear Times 30: 7 (Sept. 25, 1961).
The construction and operation of the Coordinate, by means of which it is possible to read directly, without calculations, the stitch density of full-fashioned knit fabric samples or paper patterns. (5035)

NEW METHOD FOR KNITTING TRICOT. Collins & Aikman Corp. Daily News Record No. 181: 33 (Sept. 18, 1961).
Stabilized nylon tricot with reduced stretch is claimed. (5036)

QUALITY CONTROL IN WARP KNITTED FABRICS. W. E. Symonds (Kayser Bondor Ltd). Hosiery Times 34: 59-65 (Aug. 1961).
Quality control techniques for nylon tricot from the pirn through warping, knitting, dyeing, finishing and making-up are outlined. (5037)

EUROPEAN KNITTING DIARY. R. Innes. Hosiery Trade J. 68: 140-142 (Sept. 1961).
Among the developments described are: German process for invisibly linking nylon hosiery; German Clip Matic unit for seam trimming in hosiery and knit fabrics; Santagostino hand flat bar machines. (5038)

UNIVERSAL-ff FULL-FASHIONED POWER FLAT MACHINE. Hosiery Trade J. 68: 156-159 (Sept. 1961).
Details of the automatic narrowing mechanism and operation are described. (5039)

LIBA-TEXTOR JACQUARD RASCHEL MARQUISETTE MACHINE. Liba Maschinenfabrik GmbH. Hosiery Trade J. 68: 126-131 (Sept. 1961).
The special advantages of the machine are as follows: unlimited patterning scope including shade effects; quick pattern change; high output with simple maintenance; low cost of patterning as only a few chain links are used. Features and operation are described in detail. (5040)

PRACTICAL HINTS FOR KNITTERS. PART 11. LOOP WHEEL MACHINES. Hosiery Trade J. 68: 176-177 (Sept. 1961).
Maintenance procedures are outlined. (5041)

Fabrics C4

MANUFACTURE AND USES OF THE FINISHED AND INTERMEDIATE PRODUCTS OF ASBESTOS CLOTH. Silk Rayon Inds. India 4: 16, 21 (May 1961). (5042)

QUALITY CODE FOR CARPETING. Courtaulds Ltd. Skinner's Silk & Rayon Record 35: 894-900 (Sept. 1961).
The standards required of carpets meeting the Courtaulds Extra-Duty Tested Quality label are noted. (5043)

CARPET MANUFACTURE IN INDIA. S. N. Singh. World Wool Dig. 12: 61-62 (1961). Through J. Textile Inst. 52: A365 (1961).
A brief account of the history of the production of hand-woven carpets in India and the present state of the industry is followed by a description of the social, economic, and technical organization of the work. (5044)

A STUDY OF THE PERFORMANCE OF SELECTED WASH AND WEAR SUITS FOR MEN. T. F. Faye, J. C. Wilbur, and E. Young. College of Home Economics, University of Maryland, College Park, Md. June 1961. 61 p. Research publication no. 20. $1.00.
Contents: Introduction: selection of suiting fabrics, selection of wearers, wear periods; Procedures: home laundering, drycleaning, wetcleaning, measurements for dimensional stability, panel evaluation; Discussion of findings: comments of wearers on comfort, wrinkling, soiling; other comments recorded by wearers; home laundering; drycleaning, wetcleaning; garment construction problems; fabric problems; linings; dimensional change; panel evaluation; Condition of the suits and slacks at the conclusion of the study. (5045)

APPAREL MANUFACTURING ANALYSIS. J. Solinger. Textile Book Publishers, Inc., N. Y. 1961. 796 p. $22.50.
Contents: The nature and scope of apparel production; Raw materials; Apparel design analysis; Cutting production analysis; Sewing production equipment; Analysis of sewing machine operating; Pressing and molding production analysis; Packaging; Time and motion study; Production control; Plant layout; Organization and personnel; Wages; Sales engineering; Apparel manufacturing cost control. Bibliography. (5046)

FABRICATION OF APPAREL FROM WOVEN STRETCH FABRICS CONTAINING DU PONT NYLON. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Aug. 1961. 3 p. Bull. N-145. Free. (5047)

HOW TO DESIGN AND LAY OUT MULTIPLE FABRICS. PART 3. E. B. Berry. Textile Bull. 87: 61-64 (Sept. 1961).
Layouts for double plain woven fabrics are covered. (5048)

DESIGN IN WOVEN STRUCTURE: IMITATION BACKED CLOTHS. D. C. Snowden. Wool Rev. 35: 16-17 (Aug. 1961). (5049)

MODERN FELTING. H. Dietrich. Textil-Praxis 15: 1238-1242 (1960). In German. Through J. Textile Inst. 52: A258 (1961).
A universal hardening machine, developed by Ph. Welker from the pre-war Dzulko machine, uses a patended hydraulic control system whereby the pressure on the upper plate can be varied continually even during the operation of the machine. The upper plate can be raised and lowered automatically when the web is said to be advanced a further length. Amplitude and frequency of vibration can be adjusted only when the machine is at rest, and a device is incorporated to control the final thickness of the felt. (5050)

STUDY OF THE RESISTANCE OF WOVEN WOOL FELTS TO LIQUID FLOW. J. E. Macklem (Beloit Iron Works). Tappi 44: 535-544 (Aug. 1961).
The contributions of different structural variables of a woven wool felt to its resistance to the flow of water in a direction normal to the felt (transverse direction) and in a direction along the felt (lateral direction) are considered. 28 refs. (5051)

FEUTRON SYNTHETIC FIBER FELTS. Am. Felt Co., Glenville, Conn. 8 p. Tech. Bull. 4-61.
A general description of the various types of Feutron felts available, the types of fibers used in their construction, and their applications are given. Tables covering the chemical and physical properties of Feutron 62 felts (pad type without supporting insert) and the physical properties of Feutron 61 (for air and liquid filtration) and Feutron 65 (for liquid filtration) are included. (5052)

FRICTIONAL PROPERTIES OF WOOL FELTS. A. F. Ham and D. E. Jones (Brit. Hat & Allied Feltmakers Research Assoc.). Wear 4: 198-215 (May/June 1961).
The results of a study on the frictional properties of two felts in contact and of felt in contact with hard surfaces of steel and Tufnol (as representative of the rollers used in felting machines) under dry and wet conditions are presented. 32 refs. (5053)

FOAM FILTER. Scott Paper Co. Daily News Record No. 189: 24 (Sept. 28, 1961).
The open-pore urethane foam air filters are of pleated construction and are washable and immediately reuseable without oiling or other treatment. (5054)

TRENDS, POSSIBILITIES CITED IN GROWING FOAM LAMINATES FIELD. D. Frishman (Malden Mills). Daily News Record No. 188: 44 (Sept. 27, 1961). (5055)

FOAMBACKS: REPORT FROM AMERICA. Ferralon Plastics. Skinner's Silk & Rayon Record 35: 819-820 (Sept. 1961).
This abstract of the Ferralon report makes note of the relative merits of polyester vs polyether foams and flame vs adhesive bonding. Sources of complaints are mentioned. (5056)

GLASS FIBER REINFORCED PLASTICS. A. de Dani, editor. Interscience, N. Y. 1960. 296 p. $9.75. (5057)

POLYURETHANE: THE RESIN THAT STARTED IT ALL. P. W. Sherwood. Knitter 25: 41-42 (Aug. 1961).
The chemistry, properties, and textile uses of polyurethane foams and yarns are summarized. (5058)

WHY ALL THE NOISE ABOUT FOAM LAMINATES? Knitter 25: 37-41 (Aug. 1961).
The wide variety of uses for foam laminates are noted, and methods of foam formulation, fabric engineering factors, bonding methods and adhesives, and unsolved problems are briefly summarized. (5059)

FABRICS LAMINATED TO URETHANE FOAM. N. Newman, J. Blore, and D. Frishman (Malden Mills). Am. Dyestuff Reptr. 50: P636-P641 (Aug. 21, 1961).
A group of knitted and woven fabrics flame laminated to polyester urethane foam are compared with conventional textile fabrics. 15 refs. (5060)

USE OF GLASS FIBERS IN REINFORCED PLASTICS. G. T. Mayson (Aeroplastics Ltd). Chem. & Ind. No. 31: 1193-1195 (Aug. 5, 1961).
This discussion of glass fiber reinforced polyester resins covers the properties contributed to the laminate by the fiber and resin and the production techniques used. (5061)

DEVELOPMENT OF JUTE/RESIN (NATURAL AND SYNTHETIC) COMBINATIONS. PART 2. STUDIES OF THE CONDITIONS FOR THE PRODUCTION OF JUTE LAMINATES USING WATER-SOLUBLE PHENOL-FORMALDEHYDE RESIN. D. N. Bhattacharyya, I. B. Chakraverti, and S. R. Sen Gupta (Indian Jute Mills Assoc. Research Inst.). J. Sci. Ind. Research (India) 20D: 192-197 (May 1961).
The effect of the principal variables in the production of jute-laminates, e.g. concentration of impregnating resin solution, temperature and time of precuring the impregnated fabric, laminating pressure, curing temperature and curing time, on the characteristics of the jute-laminates are reported. (5062)

GOLD AND TEXTILES. Ciba Rev. No. 3: 2-29 (1961).
Gold and silver fabrics from medieval to modern times, by M. Braun-Ronsdorf, p. 2-16; Metallic threads by lamination, by P.-A. Koch, p. 17-21; Production, properties, and uses of metalized textiles, by G. W. Kunsch, p. 22-24; Bronze prints, p. 25-28. 38 refs. (5063)

NEW COATING BEATS THE HEAT. Thermo-Chem Corp. Chem. Week 89: 57-58 (Aug. 19, 1961).
The aluminated heat-reflecting coating described is being tested for such uses as: upgrading low-cost filter cloth and urethane foam for more corrosive, higher-temperature filtration service; increasing asbestos insulation's thermal efficiency; reinforcing ceramic fibers at high temperature; lowering the cost of reflective garments. Data on the properties of the coating and its cost are included. (5064)

NONWOVEN TRENDS. M. T. Hoffman. Am. Textile Reptr. 75: 69-70 (Sept. 14, 1961).
Report on developments in machinery and techniques here and abroad. (5065)

ELECTROSTATIC MATTING PROCESS. Walsco Co. Daily News Record No. 196: 39 (Oct. 9, 1961).
The machine deposits fibers with perfect criss-crossing and extreme uniformity. In addition, the width, shape, and density of the mat can be controlled and resins, in either powder or liquid form, may be applied by the same electrostatic process. (5066)

MECHANICS OF THE NEEDLING PROCESS FOR PRODUCING NONWOVENS. H. F. Creegan. Daily News Record No. 194: 1, 32 (Oct. 5, 1961). (5067)

SOPHISTICATED NONWOVEN FABRICS. D. C. Nicely. Daily News Record No. 194: 1, 32 (Oct. 5, 1961).
The development of washable needled nonwoven fabrics is discussed. (5068)

NONWOVEN FABRICS: NEW MARKET FOR THE TEXTILE INDUSTRY. P. W. Sherwood. Can. Textile J. 78: 41-44 (Aug. 18, 1961); 29-31 (Sept. 1, 1961).
In this review, the following are discussed: economic factors, fibers and binders, methods of web formation, binder application, drying, and curing. (5069)

WHY CHEMICAL TREATMENT OF WET FELTS? L. M. Woodside (Albany Felt Co.). Paper Trade J. 145: 48-51 (Jan. 9, 1961).
The limiting factors of untreated papermakers felts and the usefulness of chemical treatments to improve absorbency, strength, wear resistance, stability, and startup are discussed. (5070)

SINGER LOCKSTITCH UNIT. Singer Sewing Mach. Co. Daily News Record No. 188: 2, 51 (Sept. 27, 1961); No. 198: 1, 36 (Oct. 11, 1961).
The Ever-Lok button-sewing machine is based on a revolutionary, single-thread lockstitch principle requiring no bobbin. (5071)

GARMENT REPUTATIONS REST ON A THREAD. R. T. Kropf (Belding Heminway Co.). Daily News Record No. 181: 17 (Sept. 18, 1961).
The importance of proper selection of and specifications for sewing threads in assuring consumer satisfaction with clothing quality is discussed. (5072)

RATE OF FELTING OF UNTREATED AND SHRINK-RESISTANT WOOL FABRICS. J. R. McPhee (C.S.I.R.O. Wool Research Labs.). Textile Research J. 31: 770-778 (Sept. 1961).
Shrinkage-time curves for a range of wool fabrics, and the effect of various shrinkproofing treatments on these curves, were studied. Felting rates of untreated fabrics depend on fabric structure and applied force. The shrinkage-time curves of treated fabrics show two definite stages, an initial portion indicating a very low felting rate, followed by a second stage where felting may be much more rapid. The importance of defining washing conditions when testing shrink-resistant wool fabrics is emphasized by results showing that quite different impressions can be gained by washing in different machines and thereby applying different mechanical forces to the fabrics. 55 refs. (5073)

EFFECT OF YARN TWIST AND FABRIC COVER FACTOR ON CREASE RECOVERY AND TEAR STRENGTH. P. B. Upadhyay, J. R. Modi, and P. C. Mehta (Ahmedabad Textile Ind. Research Assoc.). Am. Dyestuff Reptr. 50: 667-670 (Sept. 4, 1961).
The present paper gives results of the effect of yarn twist and fabric cover factor on crease recovery and tear strength of a poplin before and after treatment with a resin. The results point to some important considerations for selecting the optimum fabric constructions for such finishes. 11 refs. (5074)

COOPER TRAVERSE LOOPER GRINDER. Brit. Tufting Machy. Ltd. Textile Weekly 61 (2): 464 (Sept. 1, 1961). (5075)

FINISHING D

PRESSURE-LOK UNIT FOR DYEING AND BLEACHING SMALL LOTS. James Hunter Mach. Co. Daily News Record No. 196: 38 (Oct. 9, 1961). (5076)

INFLUENCE OF SONIC AND ULTRASONIC VIBRATIONS ON SOME PROCESSES IN THE FINISHING OF FABRICS. V. F. Androsov and A. A. Kharkharov. Technol. Textile Ind. USSR No. 1 (14): 146-149 (1960).
See abstr. 3968/60. 6 refs. (5077)

PROCESSING STRETCH FABRICS. Daily News Record No. 198: 30 (Oct. 11, 1961).
Highlights of papers presented by J. W. Lynch on dyeing and finishing of woven stretch fabrics and by R. E. Wagner on stretch fabrics containing Lycra spandex yarns at E. I. du Pont de Nemours & Co. dyeing and finishing conference. (5078)

NEW FINISHING PRACTICES FOR POLYESTER BLENDS R. E. Lacy, V. S. Salvin, and W. A. Schoeneberg. Daily News Record No. 190: 41 (Sept. 29, 1961).
Paper presented at 40th AATCC meeting. Recommended practices in yarn dyeing of polyester/cotton blends and in controlling wool staining during processing of polyester/wool blends are outlined. Pill-resistant finishing of polyester/wool fabrics and the imparting of silk-type hands to polyester/cellulose fabrics are also discussed. (5079)

CUTTING FINISHING PLANT COSTS. C. P. Roberts (Robert & Co. Associates). Textile Inds. 125: 58-61, 82-84 (Sept. 1961).
The following possible areas for effecting cost reduction are considered: flow and handling; building facilities; supply control; automation and instrumentation; centralization of responsibility; protection of finished product; methodology; employee education. (5080)

Chemical processes D1

CAUSTIC RECOVERY. W. R. Steele. Daily News Record No. 190: 41 (Sept. 29, 1961).
The savings possible by the installation of caustic soda recovery and reutilization procedures in cotton finishing plants are outlined. Paper presented at 40th AATCC meeting. (5081)

STABILIZING HYDROGEN PEROXIDE BATHS IN WOOL BLEACHING. H. Baier. SVF Fachorgan Textilveredlung 16: 72-79 (1961). In German. Through J. Textile Inst. 52: A260 (1961).
A study has been made of the relative efficiency of Calgon T, phosphates, and ammonia in stabilizing hydrogen peroxide solutions at different values of pH and of water hardness. (5082)

ONE-DIP BLEACH PROCESS FOR CELLULOSE FABRICS WITH PEROXIDE. F. Jarolimek. Textil (Prague) 13: 107-108 (1958). Through Chem. Abstr. 55: 18115g (1961). (5083)

BLEACHING WOOL WITH HYDROGEN PEROXIDE. B. K. Easton. Textile Bull. 87: 51-52 (Sept. 1961). Can. Textile J. 78: 32-35 (Sept. 1, 1961).
The paper discusses 3 general bleaching methods for wool: dry-in, steeping, and immersion bleaching. In addition to reviewing existing methods, two relatively new ideas are cited: use of a steaming operation in combination with conventional dry-in bleach system, and possibilities for developing a shorter bleaching method by elevating the temperature for relatively short period. (5084)

EFFECT OF pH, LIGHT, AND TEMPERATURE ON THE RATE OF DECOMPOSITION OF CHLORINE DIOXIDE IN SOLUTION. I. E. Flis and T. M. Vasil'eva. Trudy Leningrad. Tekhnol. Inst. No. 7: 53-61 (1959). Summary in Chem. Abstr. 55: 13006g (1961). (5085)

NEW METHODS OF OPEN-WIDTH BLEACHING. Benteler-Werke AG. Textile J. Australia 36: 754-759 (June 20, 1961).
Semi-continuous to fully continuous systems developed on the principle of unit construction which can be adapted to the output required and the application intended are described and illustrated. (5086)

CONTRIBUTION TO THE BEHAVIOR OF SYNTHETIC FIBERS DURING CARBONIZING. PART 2. G. von Hornuff and H. Hiller. Melliand Textilber. 42: 684-689 (1961). In German. Through J. Textile Inst. 52: A442 (1961).
The first part of the paper showed that carbonizing wool/polyamide fiber blends with gaseous HCl results in considerable damage to the polyamide fiber, but that carbonizing can be carried out without damage with $AlCl_3$. The present study indicates that as much of the excess carbonizing liquor as possible should be removed before drying; it is beneficial to predry the fabric at a temperature not exceeding 60° C; neutralization should be carried out with aqueous ammonia at a temperature not below 60° C. (5087)

INFLUENCE OF SURFACTANTS IN THE ACID BATH ON THE LOSS IN STRENGTH OF CARBONIZED WOOL. A. E. Davis, A. J. Johnson, and L. R. Mizell (Harris Research Labs.). (Letter to the editor). Textile Research J. 31: 825-826 (Sept. 1961).
Wetting agents per se do not protect the wool during carbonizing, but they have an indirect beneficial effect on the tensile strength of the wool by reducing the water content of the extracted, acid-treated material just prior to drying or baking. 4 refs. (5088)

STUDY OF THE CHEMISTRY OF CARROTING PROCESSES. PART 1. EFFECT OF NITRIC ACID ON RABBIT FUR. E. A. Robinson and J. Robinson (Arthur R. Davis & Co. Ltd). J. Soc. Dyers Colourists 77: 351-355 (Aug. 1961).
The chemical reactions which occur when rabbit fur is treated with dilute nitric acid, a constituent of both mercuric and many non-mercuric carroting solutions, were investigated under controlled laboratory conditions similar to those used in carroting. The mono-nitration of tyrosine side-chains occurs when certain critical conditions of temperature and reagent concentration are exceeded. Cystine cross-linkages are not affected under the same conditions. There is evidence that the introduction of a nitro group into the tyrosine side-chain may weaken adjacent peptide bonds towards both hydrolysis and oxidation. 20 refs. (5089)

STUDY OF THE CHEMISTRY OF CARROTING PROCESSES. PART 2. EFFECT OF HYDROGEN PEROXIDE AND NITRIC ACID ON RABBIT FUR. E. A. Robinson and J. Robinson (Arthur R. Davis & Co. Ltd). J. Soc. Dyers Colourists 77: 356-360 (Aug. 1961).
The simplest non-mercuric carroting solution, hydrogen peroxide and nitric acid, reacts with both cystine and tyrosine in rabbit fur. There is evidence that nitrous acid is a by-product of the oxidation of cystine by these reagents and, under the special conditions which prevail inside the fur fiber, this intermediate may play an important part in subsequent reactions and especially in the nitration of tyrosine side-chains. 12 refs. (5090)

STUDY OF THE CHEMISTRY OF CARROTING PROCESSES. PART 3. EFFECT OF MERCURIC NITRATE AND NITRIC ACID ON RABBIT FUR. E. A. Robinson and J. Robinson (Arthur R. Davis & Co. Ltd). J. Soc. Dyers Colourists 77: 361-367 (Aug. 1961).
The reactions that occur when rabbit fur is treated with a solution of mercuric nitrate in dilute nitric acid involve both cystine cross-linkages and tyrosine side-chains. Nitrous acid is an important intermediate. Mercuric nitrate and nitric acid attack tyrosine side-chains far more effectively than do mixtures of hydrogen peroxide and nitric acid at comparable concentrations; this may be one reason for the superior felting properties of mercuric-carroted furs as compared with non-mercuric-carroted furs. The evolution of carbon dioxide and nitrogen from cystine and from fur during treatment with these reagents has not been reported previously. 21 refs. (5091)

FLUOREL COATED FABRICS. Minn. Mining & Mfg. Co. Chem. Eng. News 39: 39 (Aug. 7, 1961).
Glass or Dacron fabrics impregnated with Fluorel fluorinated rubber are chemically resistant, flameproof, and withstand high and low temperatures. (5092)

COATED NYLONS: APPLICATIONS IN SPACE AND DEFENSE. Am. Textile Reptr. 75: 71-74, 80-81 (Sept. 14, 1961). (5093)

ADHESION TO FIBROUS MATERIALS. J. J. Bikerman (Mass. Inst. Technol.). Tappi 44: 568-570 (Aug. 1961).
The mechanism of adhesion to fibrous materials is reviewed. Adhesion of coatings or glues to fibrous materials usually is a mechanical, hooking, effect. In those instances in which no hooking and embedding occur, the adhesion to fibrous materials is analogous to the adhesion to nonporous solids. The rate of formation and setting of adhesive joints with fibrous adherends is determined by the shape and size of pores in the adherends, their wettability and their tendency to swell, and by the viscosity (or consistency) and the surface tension of the adhesive. (5094)

CAN CHEAPER ACRYLONITRILE CHARM COTTON? Chem. Eng. 68: 62-63 (Sept. 4, 1961).
The commercial potential for cyanoethylated cotton as a result of the reduced price of acrylonitrile is examined. (5095)

MODERN FINISHING MACHINERY. W. T. Swatek. Melliand Textilber. 42: 337-341 (1961). In German. Through J. Textile Inst. 52: A268 (1961).
As an example of modern high production wool finishing machinery, the writer describes the latest crabbing machine of Drabert-Kettling & Braun. (5096)

WRINKLE RESISTANT PROPERTIES OF DIALDEHYDE COTTON. C. H. Mack and W. A. Reeves (So. Reg. Research Lab.). Textile Research J. 31: 800-803 (Sept. 1961).
The effect of periodic acid oxidation on the wrinkle resistance of cotton fabric has been investigated. In the range of oxidation where basic fabric properties are preserved the dry wrinkle recovery angle (WRA) increases with increasing oxidation. The change in wet WRA for these fabrics is negligible, suggesting that cross-links which are evident in the dry state are broken in the presence of water. An explanation involving hemiacetal and hemialdal formation is advanced. 15 refs. (5097)

STUDY OF REACTIONS BETWEEN COTTON CELLULOSE AND DIFUNCTIONAL EPOXIDES. R. R. Benerito, B. G. Webre, and J. B. McKelvey (So. Reg. Research Lab.). Textile Research J. 31: 757-769 (Sept. 1961).
This report is concerned with an evaluation of properties imparted to cotton by diglycidyl ether of 1,4-butanediol, meso-butadiene diepoxide, Eponite 100, and vinylcyclohexene dioxide under various conditions of zinc fluoborate catalysis. Data are presented to show variation of fabric properties with mole ratios of diepoxide:$Zn(BF_4)_2$: AGU (anhydroglucose units of cotton cellulose). It has been found for all except butadiene diepoxide that a given add-on does not result in like fabric properties and that for a certain percentage improvement in dry crease resistance, a higher retention in tensile properties is obtained at the higher AGU:$Zn(BF_4)_2$ mole ratio. 19 refs. (5098)

RADIATION-INDUCED INTERACTION OF ACRYLONITRILE WITH CYANOETHYLATED COTTON. R. J. Demint, J. C. Arthur, Jr., and W. F. McSherry (So. Reg. Research Lab.). Textile Research J. 31: 821-824 (Sept. 1961).
The radiation-induced interaction of acrylonitrile with cyanoethylated cotton probably involves grafting of side chains of acrylonitrile at the site of the cyanoethyl groups. The extent of interaction is dependent on the degree of substitution of the cotton and on radiation dosage. There are increases in delayed elastic recovery and elongation-at-break and decreases in permanent set, average stiffness, and solubility of the cellulose of the treated cottons. 10 refs. (5099)

CONSIDERATIONS CONCERNING THE DESIZING OF CELLULOSIC FIBERS. A. Manich-Oliva and E. Gambus-Gabarro. Tintoreria Ind. No. 55: 275-299 (July 1960): No. 56: 337-346 (Aug. 1960). In Spanish. Through BCIRA 41: 2742 (1961).
Desizing agents and methods used are reviewed. (5100)

USE OF SODIUM CARBOXYMETHYLCELLULOSE IN SYNTHETIC DETERGENTS. N. Pilpel. Research 14: 319-325 (Aug. 1961).
An account of the manufacture of sodium carboxymethylcellulose and of the way in which it functions as a soil suspending agent in synthetic detergents. 30 refs. (5101)

DRYCLEANING: MANUAL OF CLEANING ROOM PRACTICE. E. R. Phillips, Jr. National Institute of Drycleaning, Inc., Silver Spring, Md. 1961. 179 p. $4.00. (5102)

EVALUATION OF MOTHPROOF FINISHES. O. Pajgrt and J. Ondrejka. Deut. Textiltech. 11: 163-165 (1961). Through J. Textile Inst. 52: A449 (1961).
The results are given of a series of tests on the effectiveness of various commercial mothproofing agents (Mitin, Eulan, Dieldrin, and Molan). (5103)

DRYCLEANING KNITTED OUTERWEAR GARMENTS OF ORLON. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Aug. 1961. 1 p. Bull. OR-119 (replaces Bull. OR-69). Free. (5104)

LIGHTPROOF LINING FABRICS. Nat. Inst. Drycleaning, Silver Spring, Md. July 1961. 4 p. Bull. FF-83.
Results of drycleaning tests on 6 coated lightproof drapery lining fabrics in Stoddard and perchlorethylene are reported, and precautions to be taken are noted. (5105)

PERMAC BOWE AUTOMATIC DRYCLEANING AND MILLING MACHINE. J. H. Sieber. Hosiery Trade J. 68: 160-167 (Sept. 1961). Knitted Outerwear Times 30: 53, 59 (Sept. 11, 1961).
The principles, advantages, features, and operation of the Permac Bowe machines, in which milling and aftertreatment of knitwear can be performed in a single, fully-automatic process, are described. (5106)

DISINFECTANTS FOR BEDDING. M. J. Foter. Soap 36, No. 4: 73-76, 103; No. 5: 127-141 (1960). Through J. Textile Inst. 52: A282 (1961).
The author surveys the literature on the number and types of organisms carried by fabrics under different conditions. Sterilization procedures based on dry heat with or without formaldehyde do not effect complete sterilization. A survey is made of the application and efficiency of gaseous bactericides as alternatives. Commercial laundering practices followed by ironing effectively reduce the number of bacteria in textiles, but there exists the danger of subsequent re-contamination. The use of germicidal rinses before or during the laundering procedure is regarded as a useful addition, reducing the risk of re-contamination. A list of suitable classes of disinfectants is given. (5107)

LAUNDERING OF POLYAMIDE, POLYESTER, POLYACRYLONITRILE, AND POLYVINYL CHLORIDE FABRICS. H. Harder. Fette, Seifen, Anstrichmittel 63: 25-32 (1961). Summary in Chem. Abstr. 55: 13860b (1961). (5108)

RADIATION INDUCED GRAFT COPOLYMERIZATION OF STYRENE AND NYLON. D. L. Rowat, S. Das Gupta, and J. T. Slobodian. Daily News Record No. 189: 1, 32 (Sept. 28, 1961).
The weathering properties of nylon fabrics are greatly improved by grafting styrene onto nylon in fabric form by means of gamma radiation. Paper presented at 40th AATCC meeting. (5109)

COMBINATION OF PHOBOTEX FT, FTS, OR FTC WITH SCOTCHGARD FINISH. A. Schürch (Ciba Ltd). Ciba Rev. No. 3: 30-31 (1961).
The advantages and application of combinations of Phobotex water-repellents with Scotchgard oil-repellent fluorochemicals are briefly outlined. (5110)

SPONGING OF FABRICS CONTAINING EITHER DACRON, ORLON, OR DU PONT NYLON. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Sept. 1961. 1 p. Bull. X-143 (replaces Bull. X-60). Free.
Certain fabrics may require sponging to minimize minor variations in shrinkage from piece to piece because of slight differences in finishing conditions. The following procedures are suggested if testing indicates that sponging is necessary. (5111)

ANTI-ROT FINISH FOR CELLULOSICS. Ciba Co. Daily News Record No. 179: 32 (Sept. 14, 1961).
Arigal C is suitable for continuous application with a padder, dryer, and steamer without the need for an afterwash. (5112)

RECOVERY OF WOOL FIBERS FROM WOOL SCOURING LIQUORS. C. Weimann. Industrie Textile No. 88: 105-107 (1961). Through J. Textile Inst. 52: A321 (1961). In French.
The water is discharged by a duct into a cylindrical tank and then over an umbrella-shaped disc, the bottom of which is perforated. The disc is made to vibrate and to turn slowly about its axis. Fibers longer than 5 mm are held by the filter, from which they are removed by a rubber scraper. The filtration capacity of the perforated surface corresponds exactly to the supply of water discharged by the duct. (5113)

WOOL SHRINKPROOFING BY INTERFACIAL POLYMERIZATION WITH POLYAMIDES. W. Fong et al. Daily News Record No. 189: 34 (Sept. 28, 1961).
Studies on the interfacial polymerization process have shown there are four main processing variables encountered when applying it by padding: reagent temperature; treatment time; load on the padder rolls; and wet pickup of solution by the fabric. Recent attempts to apply the treatment to garments and wool top are also described. (5114)

ANTIFELTING TREATMENT OF WOOL KNIT GOODS AND HANKS OF YARN. H. Müller and P. Seeligmüller. Deut. Textiltech. 11: 30-31 (1961). Through J. Textile Inst. 52: A268 (1961). In German.
Hanks of worsted yarn, and fabric knitted from this yarn, were wet-finished to confer relaxation shrinkage, as described in a previous article (abstr. 2043/61). Resistance to felting was conferred by wet chlorination, with the addition of a cation-active chlorine carrier. A method is suggested for calculating the amount of active chlorine in the treating bath. (5115)

FLUOROSILICONES. Dow Chem. Co. Daily News Record No. 183: 25 (Sept. 20, 1961).
Because of their nonreactive nature, the fluorosilicones are less preferable than ordinary dimethyl silicones for textile finishing. (5116)

PREPARATION AND PHYSICAL CHARACTERISTICS OF CROSS-LINKED HYPOCHLORITE OXIDIZED CORNSTARCH. R. L. Mellies, T. E. Yeates, C. L. Mehltretter, and F. R. Senti (Northern Reg. Research Lab.). Stärke 13: 114-116 (1961). In English. Summary in Chem. Abstr. 55: 17055a (1961). (5117)

EPICHLOROHYDRIN WASH AND WEAR FINISH. J. B. McKelvey. Daily News Record No. 175: 26 (Sept. 8, 1961).
While epichlorohydrin and caustic soda produce only wet crease recovery, the desired dry and wet crease recovery may be obtained by substituting sodium silicates, sodium azide, or trisodium phosphate for caustic. (5118)

SAFE HANDLING OF CHEMICALS. PART 1. USED BY THE TEXTILE AND RELATED INDUSTRIES. K. H. Ferber (Allied Chem. Corp.). Dyestuffs 44: 40-48 (June 1961).
Health hazards and safe handling procedures for strong acids, strong alkalis, oxidizing agents, and reducing agents are covered. (5119)

SUCROSE ETHER- AND ESTER-LINKED SURFACTANTS. V. R. Gaertner (Monsanto Chem. Co.). J. Am. Oil Chemists Soc. 38: 410-418 (Aug. 1961).
Several effective nonionic surface-active agents in which a single sucrose moiety is the only solubilizing group are described. 22 refs. (5120)

CONSIDERATIONS IN THE USE OF NONIONIC SURFACE ACTIVE AGENTS. C. E. Colwell and W. E. Rixon (Union Carbide Chem. Co.). Am. Dyestuff Reptr. 50: P679-P682 (Sept. 4, 1961).
Those factors which modify, inhibit, or enhance the functioning of the nonylphenol-ethylene oxide surfactants have been considered. The effects of temperature, electrolytes, solvents and other surfactants on the performance of the nonionic surfactants can be predicted or determined by experimentation and used to advantage in many industrial processes. (5121)

APPLICATIONS OF INFRARED SPECTROGRAPHY FOR FATS. J. Chouteau (Fac. Sci., Marseille). Rev. Franc. Corps Gras 8: 267-284 (1961). Through Chem. Abstr. 55: 18139b (1961). In French. (5122)

FACTORS AFFECTING THE EFFICIENCY OF WASHING PROCESSES. G. J. Parish. Textile Mfr. 87: 336 (Aug. 1961).
The derivation of the washing parameter as a factor for measuring the efficiency of washing is explained. The washing parameter is not only a function of the layout of the washing machine but is also dependent on such factors as the type of fabric, the type of impurity, and the fabric speed. It is therefore characteristic of the whole washing arrangement. (5123)

CONTRIBUTION TO THE MEASUREMENT OF WATER REPELLENCY. G. Mazingue, G. Messien, and M. van Overbeke. Bull. Inst. Textile France No. 91: 27-43 (Nov./Dec. 1960). In French. Through BCIRA 41: 2775 (1961).
A cotton fabric was treated with each of 36 waterproofing products now on the market, and the resultant degrees of water repellency were measured by means of the hydrostatic pressure apparatus and a rain-and-friction device. The results are presented in this paper, together with tables showing the fastness to washing and drycleaning. (5124)

CHEMICALS IN THE WASH-AND-WEAR FIELD. F. K. Burr (Fabric Research Labs.). Daily News Record No. 177: 26 (Sept. 12, 1961).
Summary of report presented at 140th national meeting of ACS on present and future developments in cross-linking agents for wash and wear finishes. (5125)

SELF-SMOOTH FABRICS: USE OF FORMALDEHYDE. J. T. Marsh. Textile Mfr. 87: 327-330 (Aug. 1961).
A re-examination of the inherent possibilities of formaldehyde has revealed two processes of technical importance. The first of these is the production of wet-recovery cottons treated with additives such as polyethylene emulsions to offset the reduction in ripping strength. The second is the successful addition of a high measure of dry recovery to the wet recovery produced at room temperatures by operating under conditions of controlled and moderate swelling. Fundamentally, the two types of treatment with formaldehyde at room temperatures are batch processes, but there appears to be good reason for assuming that continuous processing could be employed. 15 refs. (5126)

NEW FINISH FOR WASH-WEAR COTTONS. R. L. Arceneaux et al. Daily News Record No. 189: 1, 32 (Sept. 28, 1961).
Cottons treated with an inexpensive cross-linking agent, ethyl N, N-dimethylol carbamate, prepared from urethane and formaldehyde show good all-around wash-wear properties and, unlike other nitrogenous finishes, should have good resistance to commercial launderings. Paper presented at 40th AATCC meeting. (5127)

RESIN FINISHING COTTON KNITS: PROGRESS REPORT. P. B. Roth and F. G. Hewit (Am. Cyanamid Co.). Textile Inds. 125: 63-66, 80, 104-106 (Sept. 1961).
The practical application of resin finishes are traced from their introduction in the 1950's to their present state. Some discussion on testing procedures for the determination of dimensional stability, strength measurements, and resistance to staining is included. (5128)

WRINKLE- AND MUSS-RESISTANT FINISH FOR COTTON USING FORMIC ACID COLLOID OF METHYLOLMELAMINE. W. N. Berard, E. K. Leonard, and W. A. Reeves (So. Reg. Research Lab.). Am. Dyestuff Reptr. 50: 627-630, 634 (Aug. 21, 1961).
Cotton fabric has been made wrinkle resistant by treating with a freshly prepared formic acid colloid of methylolmelamine. The method of application of the freshly prepared acid colloid is essentially the same as used for resin finishing; that is, pad, dry, and cure. The main difference is the use of formic acid in the treating solution to produce a colloid and to serve as the catalyst. 10 refs. (5129)

FORMIC ACID COLLOID OF METHYLOLMELAMINE RESIN FINISH OF COTTON FOR WRINKLE- AND MUSS-RESISTANCE: PRELIMINARY COST STUDY. K. M. Decossas, O. J. McMillan, Jr., W. N. Berard, W. A. Reeves, E. F. Pollard, and E. L. Patton (So. Reg. Research Lab.). Am. Dyestuff Reptr. 50: 631-633 (Aug. 21, 1961).
Investment and operating costs for a hypothetical plant are reported. The study is based on finishing 80 x 80 cotton print cloth, 50 in. wide, 3.12 linear yd/lb, to a 7% resin add-on, by continuous operations, at a processing rate of 120 yd/min. The costs range from 2.7 to 3.7¢/sq yd, or from 10.8 to 14.8¢/lb of product. 9 refs. (5130)

CELLULOSE-BUTADIENE DIEPOXIDE REACTION AND ITS EFFECT ON THE CREASE RESISTANCE OF COTTON. J. B. McKelvey, R. R. Benerito, B. G. Webre, and R. J. Berni (So. Reg. Research Lab.). J. Polymer Sci. 51: 209-230 (May 1961).
Butadiene diepoxide may be added to cotton cellulose with a variety of catalysts and conditions at room temperature. Slow addition of epoxide from carbon tetrachloride solution to cotton fabric impregnated with dilute alkali, neutral salts, or alkaline salt solutions produces a fabric of good dry and wet crease recovery. Rapid addition of epoxide to fabric by the use of more concentrated alkali or elevated temperature showed excellent wet, but no dry, crease recovery. All methods of addition that produce good dry crease recovery cause a lowering of tearing and breaking strengths. There is little change in tensile properties when only wet crease resistance is imparted. The bearing of the results on current cellulose cross-linking theories is examined. 41 refs. (5131)

PERMANENT SILICONE FLAT-PRESS PROCESS FOR WORSTED. E. G. Sutcliffe (Samuel Hird & Sons). Textile Inds. 125: 109-111 (Sept. 1961).
Data on the appearance after washing of worsted fabrics treated by the silicone flat-press process in combination with the Si-Ro-Set shrinkproofing process prior to making-up are reported. (5132)

Dyeing and printing D2

DICTIONARY OF DYEING AND TEXTILE PRINTING. H. Blackshaw and R. Brightman. George Newnes Ltd, London. 1961. 221 p. $4.20 [approx.].
Special attention has been paid to chemical compositions by the use of formulas and diagrams. Drawings illustrate some of the more complex textile processes. Reading list. List of manmade fibers. (5133)

STUDIES ON THE DYEING OF ACRYLONITRILE FIBER. PART 7. QUANTITATIVE ANALYSIS OF NITRILE GROUP IN POLYACRYLONITRILE. PART 8. VARIOUS METHODS OF PREPARING CUPROUS ION. Y. Takase. J. Soc. Textile Cellulose Inds. Japan 17, No. 5: 421-427 (1961). In Japanese (English summary). Through BCIRA 41: 2761 (1961).
Part 7. Samples should be decomposed slowly, before Kjeldahl treatment, with 1% hydrogen peroxide solution. Part 8. Hydroxylamine sulfate gives the best results but ferrous sulfate, for example, can be used for dyeing light shades. (5134)

DYEING POLYACRYLONITRILE FIBER IN THE PRESENCE OF MONOVALENT COPPER. A. A. Geller and A. B. Pakshver. Khim. Volok. No. 3: 19-21 (1960). In Russian. Through BCIRA 41: 2760 (1961).
The mechanism of dyeing polyacrylonitrile fiber by the cuprous-ion method has been studied. (5135)

FIBER REACTIVES: EXHAUST DYEING. R. Bright. Textile Inds. 125: 70-76 (Sept. 1961).
Pointers on the application of the cold dyeing Procion dyes to cotton and rayon yarns in skein and package dyeing systems. (5136)

CAUSES OF TAILING IN THE PAD-BATCH DYEING PROCESS. M. Capponi (Sandoz AG). Am. Dyestuff Reptr. 50: 619-624 (Aug. 21, 1961).
The object of this present work was to investigate possible causes of tailing in dyeing with Drimarene Z reactive dyes according to the pad-batch method (abstr. 3600/61). It was observed that the main causes are the affinitive effect of the dyes, and the depletion of OH-ions in the padding liquor during padding. Except for a few cases, which are mentioned, under normal padding conditions no affinity has been observed when dyeing with Drimarene Z dyes. Application in the padding liquor of a blend of sodium hydroxide--sodium metasilicate as alkaline agent has the effect of repressing the uptake of OH-ions during the padding process. (5137)

DYEING OF NATURAL SILK WITH ACID MORDANT DYES BY THE SINGLE-BATH METHOD. PART 3. S. K. Averbukh and M. K. Lepetkova. Technol. Textile Ind. USSR No. 1 (14): 137-145 (1960).
See abstr. 4007/60. 5 refs. (5138)

AZO AND DIAZO CHEMISTRY: ALIPHATIC AND AROMATIC COMPOUNDS. H. Zollinger. Interscience, N.Y. 1961. 444 p. $16.50. (5139)

NEW ASPECTS OF THE CHEMISTRY OF DYESTUFFS: DYEING OF SYNTHETIC FIBERS. M. R. Gagneux. Teintex 26, No. 5: 323-325 (1961). In French. Through BCIRA 41: 2756 (1961).
In this review, the development of synthetic dyes and manmade fibers is discussed, production figures are given, dyeing of polyester and acrylic fibers is described, reference is made to optical bleaching agents and antistatic products, and some historical data are given on the production and constitution (including manufacturers) of some fibers and dyes. (5140)

COMMERCIAL FEASIBILITY OF LAC DYE USE. Silk Rayon Inds. India 4: 10 (May 1961).
Results of experiments on the use of lac dyes for wool with different mordants are briefly reported. (5141)

CONTINUOUS DYEING PROCESS FOR WOOL TOP SLIVER. K. Fiedler. Textil-Praxis 16: 383-385 (1961). In German. Through J. Textile Inst. 52: A378 (1961).
The firm of Geigy has developed a continuous dyeing process for wool top sliver, the Irga-Pad-Kammzugverfahren. It consists of 4 basic operations: impregnating with concentrated dye liquor (dye, wetting agent, and alginate thickener) at 50° C; steaming with moist steam for at least 1.5 min; fixing the dye using an acid-shock treatment (formic acid at 60° C); and washing out the thickener with a nonionic detergent and rinsing. Machinery for the process has been developed in conjunction with Fleissner, the continuous steaming being carried out on a modification of the perforated drum dryer, and a 4- or 5-bowl backwasher providing facilities for acid fixing, washing, and rinsing. Examples of dye recipes include weakly acid dyeing and 1:2 metal-complex wool dyes. (5142)

PHYSICAL-CHEMICAL PROPERTIES OF COACERVATE SYSTEMS APPLICABLE TO DYEING. B. Milicevic and F. Kern. Textil-Rundschau 16: 190-197 (1961). In German. Through J. Textile Inst. 52: A379 (1961).
Properties of colloidal solutions employed in the so-called coacervate-dyeing of wool are discussed, and their bearing on the dyeing process are considered. (5143)

DYEING WOOL AND WOOL MIXTURES AT TEMPERATURES ABOVE 100° C: USE OF PROTECTIVE AGENTS. A. Würz. Melliand Textilber. 42: 439-444 (1961). In German. Through J. Textile Inst. 52: A446 (1961).
Wool yarn was treated for 1, 2, 3, and 4 hr at pH 2.8, 3.5, 5.5, and 7 at 105° C, 110° C, 115° C, and 120° C without a fiber-protective agent and in the presence of formaldehyde or a sulfite waste liquor or a protein degradation product. Modifications to the wool were determined, using mechanical and chemical tests. The results indicate that wool, and mixtures of wool and synthetic fibers, can be dyed for 4 hr at 105° C, or for 3 hr at 110° C, or for 2 hr at 115° C, or for 1 hr at 120° C, when 5% of 30% formaldehyde is added to the dyebath. (5144)

PRESSURE DYEING BECKS. C. B. Ordway. Daily News Record No. 190: 40 (Sept. 29, 1961).
Advantages of twin pressure becks, which dye synthetic and natural fibers in 100% and blended fabrics in rope form at temperatures up to 250° F, are cited. (5145)

ORIGINAL VEGETABLE DYES IN LATIN AMERICA. A. Marzocca. Tintoreria Ind. No. 57: 373-384 (Sept./Oct. 1960). In Spanish. Through BCIRA 41: 2745 (1961). (5146)

YARDGOODS DYE JIG WITH AUTOMATIC CYCLOTRIC DRIVE. Gebr. Poesgen GmbH. Knitted Outerwear Times 30: 51, 57 (Sept. 11, 1961).
The cyclotric drive ensures an absolutely constant fabric tension as well as a perfectly constant fabric speed. The drive mechanism is described. (5147)

DYEING OF NYLON STOCKINGS ON AN AUTOMATIC APPARATUS. G. Herbulot and H. Tusveld. Teintex 26, No. 5: 336-342 (1961). In French. Through BCIRA 41: 2757 (1961).
The mechanism of the new Teintofix 760 stocking dyeing machine (Heliot Co.) and the dyeing process are described, a selection of Hyloquinone dyes is listed, and two examples are given for calculating the amount of dye required. (5148)

DYEING OF CHEMSTRAND CUMULOFT NYLON CARPET. Chemstrand Corp., Dyeing & Finishing Service, Decatur, Ala. Aug. 1961. 9 p. No. 8, suppl. 2.
Recommendations for skein and piece dyeing Cumuloft textured nylon carpet yarn. (5149)

MODERN METHODS OF DYEING STOCKINGS. D. B. McPherson (Sketchley Ltd). Hosiery Times 34: 41-47 (Aug. 1961).
Past and present methods are reviewed and future trends are predicted. (5150)

USE OF SODIUM BICARBONATE DURING MACHINE DYEING OF COTTON YARNS WITH VAT DYES. H. Borsten. Tex 20, No. 3: 111-117 (1961). In Dutch. Through BCIRA 41: 2753 (1961).
Sodium bicarbonate (1.02 kg/l sodium hydroxide [38° Bé] in the bath), added in the last phase of the dyeing process just before the oxidation stage, leads to deeper colors. The addition must be effected as fast as possible, preferably within 3 min. The levelness and crocking fastness of the yarns are the same as in normally-dyed yarns. The use of sodium bicarbonate reduces the costs by about f 0.12-0.15/kg yarn. (5151)

VAT DYEING TODAY. PART 6. O. W. Clark. Textile World 111: 80-84 (Sept. 1961).
The principal methods of dyeing cotton warps with vat dyes, advantages and pitfalls, and typical working formulas are summarized. (5152)

TEXTILE CHEMICAL INVESTIGATIONS. PART 5. NATURE OF THE BOND BETWEEN REACTIVE DYES AND CELLULOSE. B. Krazer and H. Zollinger (Univ. Basel, Switzerland). Helv. Chim. Acta 43: 1513-1522 (1960). In German. Summary in Chem. Abstr. 55: 17013b (1961). (5153)

RELATION BETWEEN THE STRUCTURES OF A SERIES OF DIRECT DYES, THEIR PARTICLE SIZE IN SOLUTION, AND THEIR SPEED OF DIFFUSION INTO CELLULOSE FIBERS. B. N. Mel'nikov, B. M. Krasovitskii, and P. V. Moryganov. Technol. Textile Ind. USSR No. 1 (14): 126-136 (1960).
See abstr. 4020/60. 19 refs. (5154)

H ACID: IMPORTANT DYESTUFFS BUILDING BLOCK. P. M. Crosby (Allied Chem. Corp.). Dyestuffs 44: 54-60 (June 1961).
The preparation of H acid (8-amino-1-naphthol-3, 6-disulfonic acid) and some examples of azo dyes made from it are described. 12 refs. (5155)

STUDIES ON DIRECT DYEING IN POLYMER SOLUTION. PART 3. DECREASE OF APPARENT AFFINITY OF DYESTUFFS FOR CELLULOSE AND HEAT OF ABSORPTION FOR POLYMER IN SOLUTION. Y. Suda and T. Shirota. J. Soc. Textile Cellulose Inds. Japan 17, No. 5: 414-420 (1961). In Japanese (English summary). Through BCIRA 41: 2752 (1961).
Dyeing in the presence of wheat starch was studied. (5156)

OXIDATION OF COTTON CELLULOSE IN THE PRESENCE OF DIRECT COTTON DYES. K. V. Datye, G. M. Nabar, and G. G. Shroff (Univ. Bombay). Textile Research J. 31: 813-820 (Sept. 1961).
Cotton cellulose dyed with direct cotton dyes was oxidized with buffered sodium hypochlorite solutions under different conditions. An attempt was made to correlate the extent of degradation of cellulose and the oxygen consumption during oxidation with the chemical constitution of dyes. The behavior of dyed samples during exposure to Fade-Ometer light has also been examined to study the influence of the constitution of the dyes. The results are discussed with a view to correlating the behavior of these dyes with that of leuco vat dyes under similar conditions. 28 refs. (5157)

RECENT DEVELOPMENTS IN PRINTING. F. V. Davis. Textile Mfr. 87: 334-336 (Aug. 1961).
The following developments and their impact on printing technology are briefly reviewed: reactive dyes; flash aging; new dyes for azoic printing; Thermosol process; Star process. (5158)

REACTION KINETICS OF CYANURIC CHLORIDE WITH ANILINE AND MONOMETHYLANILINE IN NON-POLAR MEDIUM. B. Bitter and H. Zollinger. Helv. Chim. Acta 45, No. 3: 812-823 (1961). In German. Through BCIRA 41: 2750 (1961).
The ability of cyanuric chloride to exchange gradually its 3 chlorine atoms (the first at 0-10°, the second at 20-30°, the third at 50-70°) is of great importance for various classes of triazine reactive dyes (dichlorotriazines of the Procion-type, monochlorotriazines of the Cibacron-type). The reaction kinetics of cyanuric chloride, 1-anilino-3,5-dichlor-2,4,6-triazine and 1-(N-methyl-anilino)-3,5-trichlor-triazine with aromatic amines in benzene solution were studied. (5159)

REACTIVE DYES FOR CELLULOSE. I. D. Rattee. Endeavour 20: 154-161 (July 1961). Through BCIRA 41: 2751 (1961).
The development, reaction kinetics, and limitations of reactive dyes are discussed. 29 refs. (5160)

TIPS ON EMULSION PRINTING. C. A. Amick. Textile World 111: 93-94 (Sept. 1961).
The comparative advantages and disadvantages of water-in-oil and oil-in-water emulsion printing are cited, and step-by-step procedures are described. (5161)

CHEMISTRY OF REACTIVE DYES. H. Zollinger and O. Bayer. Angew Chem. 73, No. 5: 343 (1961). In German. Through BCIRA 41: 2749 (1961).
In supplementation of a previously published paper (abstr. 3027/61), it is pointed out that the assortment of Cibalan Brilliant dyes was developed by a team of several chemists, and that the German patents 743 766, 859 185, and 899 536 describe the preparation of reactive dyes for wool (azo dyes, containing twice the residue $-SO_2-NH-CH_2-CH_2-Cl$). This work was discontinued because of war conditions and not followed up later. (5162)

INFRA-RED FIXATION: ALTERNATIVE MEANS OF FIXING CIBACRON DYEINGS. P. Ulrich (Ciba Ltd). Ciba Rev. No. 3: 36-39 (1961).
The various systems and conditions of fixation applicable to monochlorotriazine dyes are summarized, and the potential advantages of infra-red fixation are described and illustrated. (5163)

USE OF ULTRA-DISPERSE POWDER BRANDS OF PERNITHRENE DYES IN MACHINE DYEING. B. J. Pelle. Tex 20, No. 3: 118-122 (1961). In Dutch. Through BCIRA 41: 2748 (1961).
Pigment dyeing with ultra-disperse Pernithrene dyes is described in detail and its advantages (levelness and dye penetration) are pointed out. (5164)

WOOL PRINTING WITH CIBACRON DYES. W. Badertscher. SVF Fachorgan Textilveredlung 16: 194-198 (1961). Through J. Textile Inst. 52: A379 (1961). In German.
Recipes and instructions are given for the use of Cibacron dyes for printing chlorinated wool, unchlorinated wool, and mixtures of wool with other fibers. (5165)

PRINTING WITH PIGMENTS ON A POLYVINYL ACETATE EMULSION BASE. G. I. Shilova. Technol. Textile Ind. USSR No. 1 (14); 150-153 (1960).
See abstr. 4001/60. (5166)

ROTARY SCREEN PRINTING. O. F. Habel (Gen. Aniline & Film Corp.). Textile Inds. 125: 93-95 (Sept. 1961).
Features and operation of the Morrison rotary screen printing machine are described. (5167)

PROGRESS REPORT: AUTOMATIC SCREEN PRINTING. S. M. Suchecki. Textile Inds. 125: 54-57, 77-78, 81 (Sept. 1961).
Economic factors, methods, and machines are surveyed. (5168)

FULLY AUTOMATIC SCREEN PRINTING: ZIMMER AUTOMAT. G. Dowling. Textile Merc. 145: 183-186 (Aug. 11, 1961).
Following a discussion of the fundamental differences between mechanical screen printing and screen printing on tables, the features and operation of the Zimmer Automat are described. A schematic drawing of the machine is included. See also abstr. 4483/60. (5169)

THERMACROME MACHINE FOR PRINTING CIRCULAR KNITTED FABRICS. Thermacrome Ltd. Hosiery Trade J. 68: 135 (Sept. 1961).
Patterning is achieved by the use of reels of heat applied paper transfers executed in continuous designs of 1, 2, or 3 colors. (5170)

DESIGN FOR BETTER FLASH AGING. L. A. Prescott (Tower Iron Works). Textile Inds. 125: 69, 106 (Sept. 1961).
Factors of construction, operation, and installation affecting flash ager efficiency are discussed. (5171)

Mechanical processes D3

LANA FABRIC BRUSHING AND RAISING MACHINERY RANGE. F. Liedl AG. Textile Weekly 61 (2): 471-472 (Sept. 1, 1961). (5172)

PNEUMATIC CUTTING OF TEXTILES ALONG WARP AND WEFT. K. Kratky. Textil 16, No. 5: 171 (1961). In Czech. Through BCIRA 41: 2736 (1961).
The device is described and illustrated. (5173)

MENSCHNER MEASURING AND ROLLING MACHINE. Menschner (J.) Textilmaschinenfabrik. Textile Merc. 145: 188 (Aug. 11, 1961).
The main part of the machine is a calibrated measuring head which, in conjunction with a control device, is designed to ensure that the fabrics run through without tension. A marking device is fitted for printing the length recorded by the measuring head on the selvage of the cloth at intervals of half a yard or half a meter. (5174)

WET-BRUSHING MACHINE. J. A. F. van Wees Machinefabriek. European Tech. Digests 6, No. 7: 87-88 (July 1961).
Effective, intensive, and even brushing with high luster over entire cloth in one operation is claimed. (5175)

UNIVERSAL GRINDING MACHINE FOR RAISING MACHINE ROLLERS. Drabert-Kettling & Braun. Melliand Textilber. 42: 556-557 (1961). In German. Through J. Textile Inst. 52: A449 (1961).
The machine, which has 3 different types of grinding head (flat, card wire, and multiple-disc) each driven by a separate motor, holds four pile or counterpile rollers (up to 220 mm diam.), two of which can be flat-ground while two others are being polished with the card wire or edge-ground with the multiple-disc. Accessory devices can be fitted to enable raising rollers to be clothed on the machine, and for grinding the blades and cylinders of cropping machines. (5176)

PILE CLOTH SMOOTHING AND LUSTER FINISHING MACHINE WITH MOISTENING UNIT. J. Mortamet Etab. Textile Merc. 145: 153, 165 (Aug. 4, 1961). (5177)

GUIDE TO ULTRASONIC SEALING EQUIPMENT. H. Deans. Modern Plastics 38: 95-102, 165-166 (Aug. 1961).
In equipment for ultrasonic sealing of plastic film, the energy is transmitted from the source or generator to the work by means of a solid metallic tool, and the design of the tool is a major factor in providing a satisfactory seal of the plastic. (5178)

CONTINUOUS CLOTH BATCHER. Sir James Farmer Norton & Co. Ltd. Daily News Record No. 186: 33 (Sept. 25, 1961).
The machine can be fitted with an automatic control that enables one man to look after the delivery ends of several finishing machines. (5179)

Drying, setting, conditioning D4

SETTING WOOL BY HEAT AND MOISTURE: STEAMING OF WOOL YARNS. B. Mihalik and I. Asboth. Textil-Praxis 16: 167-172 (1961). In German. Through J. Textile Inst. 52: A423 (1961).
After discussing the mechanism of setting, the authors describe experiments on the effect of steaming at different temperatures and for various periods on the mechanical and chemical properties of wool yarns. Steaming at 80-90° C for 30 min has a more even effect than high-temperature short-duration steaming, and there is less likelihood of fiber damage. Using vacuum ovens, temperatures down to 60° C become effective, and very even treatment of packages is possible. (5180)

BIBLIOGRAPHY ON DRYING. Tappi Drying Comm. Tappi 44: 154A-155A (Aug. 1961).
Selected bibliography of 98 references covering the following categories: general theory, drum dryers, Yankee dryers, air in drying, radiant heat drying, vacuum drying, hot oil drying, dryer controls and systems, and practical aspects. (5181)

CHEMICAL INVESTIGATIONS ON CHANGES IN WOOL DURING DRYING. D. Hildebrand. SVF Fachorgan Textilveredlung 15: 617-622 (1960). Through J. Textile Inst. 52: A56 (1961). In German.
The behavior of wool at high temperatures is discussed, details being given of chemical changes in heat-damaged wool, and of the detection of damage in drying by chemical methods. Wool top dried in modern high-production dryers showed essentially the same chemical reactions as untreated material. (5182)

USE OF UNHEATED AIR IN THE DRYING OF WOOL. J. G. Downes and G. B. McMahon (C. S. I. R. O. Wool Research Labs.). Textile Research J. 31: 779-786 (Sept. 1961).
In drying wool by forced air flow to a uniform regain in the range 8% to 16%, the amount of water removed per unit volume of air used is almost independent of the air temperature. In view of this, the paper examines the practicability and economics of using unheated air for wool drying. 9 refs. (5183)

HEAT-SHRINK TUNNEL. Cleveland-Detroit Corp. Daily News Record No. 175: 23 (Sept. 8, 1961). (5184)

SETTING OF ANIMAL FIBERS IN SOLUTIONS OF THIOUREA DIOXIDE. L. S. Bajpai and C. S. Whewell (Leeds Univ.). J. Soc. Dyers Colourists 77: 350-351 (Aug. 1961).
Data are given on the setting of wool and human hair in solutions of thiourea dioxide under various conditions. The effectiveness of thiourea dioxide is probably associated with the ability of this reagent to reduce -S-S- bonds in the fiber, for fibers in which -S-S- bonds are converted into more stable -C-S-C- linkages do not take a set. Deaminated fibers take a set in thiourea dioxide solution but not in water. (5185)

TESTING AND MEASUREMENT E

PRINCIPLES OF TEXTILE TESTING. J. E. Booth. Chemical Pub. Co., Inc., 212 Fifth Ave., N. Y. 1961. 497 p. $12.50.
Contents: Introduction to testing; Elements of statistics; Selection of samples for testing; Moisture relations and testing; Fiber dimensions and quality; Yarn dimensions; Fabric dimensions and properties; Tensile testing of textiles; Evenness testing; Miscellaneous testing instruments; Quality control. References. (5186)

SPECTRAL DISTRIBUTION OF SOUND PRODUCED BY FIBERS AND FABRICS IN FRICTION. PART 1. IMPROVED INSTRUMENTATION. W. J. Thorsen (Agri. Research Serv.), and P. Veneklasen (Western Electro-Acoustic Lab.). Textile Research J. 31: 804-809 (Sept. 1961).
The constructional details and theory of operation of a highly stable and sensitive fiber and fabric friction sound analyzer are described. Sound pressure curves for three typical fabrics and one bulk wool are shown. 2 refs. (5187)

Fibers E1

A METHOD OF INVESTIGATION OF THE STRESS-STRAIN BEHAVIOR OF FIBERS AT VERY HIGH RATES OF EXTENSION. G. M. Lewis. Proc. Conf. on the Properties of Materials at High Rates of Strain, Instn Mech. Engrs., p. 190-194. Brit. Rayon Research Assoc. Sci. Reprint no. 79. Through BCIRA 39: 2927 (1959).
The method is for observing stress variations in specimens strained at about 20,000%/sec, from zero strain up to breaking point. The stress pulse produced by the impact of a lead pellet on an arm to which one end of the specimen is attached is communicated via a piezoelectric gage to a ballistically-suspended steel rod. Results for nylon monofil, and Terylene and cellulose acetate continuous-filament yarns are described and discussed. (5188)

SAMPLE PREPARATION OF FIBERS FOR IDENTIFICATION BY INFRARED SPECTROSCOPY. S. Burgess and H. Spedding (Shirley Inst.). Chem. & Ind. No. 30: 1166-1167 (July 29, 1961).
The preparation of fiber-films by means of a hydraulic press is described. (5189)

IDENTIFICATION OF ANIMAL FIBERS. A. B. Wildman. J. Forensic Sci. Soc. 1: 115-119 (1961). Through J. Textile Inst. 52: A334 (1961).
The principles of animal-fiber identification are reviewed. The only satisfactory procedure is the use of microscopy, combined with a sound knowledge of fiber morphology and careful interpretation of the observations made. Methods of making whole mounts and scale casts, and the use of cross-sections, are briefly described and discussed. (5190)

ANALYSIS OF FIBER BLENDS. PART 2. ANALYSIS OF BINARY BLENDS OF POLYVINYL CHLORIDE WITH OTHER FIBERS. Bull. Inst. Textile France No. 91: 109-112 (Nov./Dec. 1960). In French. Through BCIRA 41: 2799 (1961).
This article describes a method of proportioning polyvinyl chloride in blends with wool, silk, regenerated protein fibers, cellulosic fibers, polyamides, polyesters, acrylic fibers, polyvinyl alcohols or acetals, and glass fiber. The method applies to any form of fiber blend: flocks, roving, yarn, woven, or knitted fabric, etc. For part 1 see abstr. 1124/61. (5191)

STUDY CONCERNING AN IMPROVED STANDARD FOR GRADING EGYPTIAN COTTON. H.-P. Hartenhauer and G. Schubert. Deut. Textiltech. 11, No. 5: 244-247 (1961). In German. Through BCIRA 41: 2786 (1961).
The purely visual classing method was found inadequate by the authors who submit, after a brief review of the known rapid testing methods, three proposals for a new cotton standard, based on the test-spinning method; the latter represents economically and technologically the most advantageous testing method. (5192)

REPORT ON WOOL FOR USE IN AIR-FLOW TESTS. S. L. Anderson. Ann. Sci. Textiles Belges No. 1: 7-14 (1961). In French. Through J. Textile Inst. 52: A390 (1961).
The results are given of a test in which the mean diameter of fibers from 9 combed slivers were measured in 6 laboratories. The test was sponsored by the Technical Comm. of the I.W.T.O., with the object of providing slivers of average diameter for calibrating the air-flow apparatus. (5193)

TWISTED BUNDLE BALLISTIC TESTS OF JUTE FIBER UNDER LONGITUDINAL JERK. S. B. Bandyopadhyay and B. K. Bose (Indian Central Jute Comm.). (Letter to the editor). Textile Research J. 31: 828-830 (Sept. 1961). (5194)

SOLUBILITY OF WOOL IN BROMINE WATER. M. Leveau and M. Caillet. Bull. Inst. Textile France No. 91: 101-108 (1960). In French. Through J. Textile Inst. 52: A278 (1961).
The solubility of wool in bromine water varied with the concentration, pH and temperature of the bromine water and with the duration of treatment. The solubility of wool, which had been pretreated in various ways, in bromine water, in sodium hydroxide and in urea-bisulfite, was determined. In most cases, the differences were slight. The test is, however, useful for identifying severe damage by acid or alkaline hypochlorite. (5195)

MICROSCOPIC INVESTIGATIONS ON DYED WOOL. R. Lassé. Textil-Rundschau 16: 1-3 (1961). Through J. Textile Inst. 52: A278 (1961). In German.
In studying the dye penetration of wool fibers by means of cross-sections, it was found advantageous to coat the fibers with collodion before embedding in wax. Black-and-white photomicrographs are shown. (5196)

FELTING TEST FOR LOOSE WOOL AND TOPS. G. Blankenburg and H. Zahn. Textil-Praxis 16: 228-232 (1961). In German. Through J. Textile Inst. 52: A336 (1961).
A shaking machine is used, in which is clamped a flask containing washed and opened wool or top, and a buffer solution. The diameter of the balls of felt formed is measured by means of a micrometer-gage. The effects on the degree of felting of the following variables are discussed: shaking time, position of the flask in the shaking box, amount of liquid in the flask, shape of the flask, and shaking frequency. There is a low consumption of time and material, good reproducibility, and ease of adaptability to industrial conditions. The test is especially useful for predicting the felting of wool in scouring. (5197)

POLAROGRAPHIC DETERMINATION OF TYROSINE IN WOOL. L. Benisek. Faserforsch. u. Textiltech. 12: 74-78 (1961). In German. Through J. Textile Inst. 52: A461 (1961).
A method is described for estimating the tyrosine content of wool by the polarographic determination of 3,5-dinitrotyrosine in the nitrated hydrolysate. The tyrosine content of wool is not affected by acids, alkalis, reducing agents, boiling or steaming; it is reduced by only about 12% by treatment with H_2O_2; chlorine treatment, however, reduces it by about 65%, and thus the technique is a useful specific test for chlorination. The method is simpler, more sensitive and less time-consuming than a colorimetric method. (5198)

EFFECT OF THE TEMPERATURE OF THE AIR AND OF THE BAROMETRIC PRESSURE IN WOOL FIBER-FINENESS DETERMINATION BY THE AIR-FLOW APPARATUS. M. Greuel and C. Sustmann. Textil-Praxis 16: 225-228 (1961). In German. Through J. Textile Inst. 52: A335 (1961).
Correction factors are given for the micron value readings if the atmospheric conditions differ from the calibrated conditions of the rotameters in the apparatus. Working in a standard atmosphere, the temperature correction can be neglected, but the barometric pressure must be taken into account for each test if it is more than $\pm$ 10 mm mercury. (5199)

REFRACTOMETRIC DETERMINATION OF THE RESIDUAL GREASE CONTENT IN WASHED WOOL. G. Nitschke. Z. ges. Textil-Ind. 62: 1013-1016 (1960). Summary in J. Textile Inst. 52: A460 (1961). (5200)

TWO LAWS FOR THE FIBER-LENGTH DISTRIBUTION OF COMBED LONG-FIBERED WOOL. W. Wegener and W. Rosemann. Melliand Textilber. 40: 1381-1387 (1959). In German. FORMULATION OF A THIRD LAW FOR THE FIBER-LENGTH DISTRIBUTION OF COMBED WOOL. Melliand Textilber. 42: 383-391 (1961). In German. Through J. Textile Inst. 52: A391 (1961).
These two papers give formulas that are derived to account for observed fiber length distributions of wool samples in various length ranges. (5201)

CORRECTING THE TRADE WEIGHT OF WOOL. H.-J. Henning and C. Sustmann. Melliand Textilber. 42: 12-15 (1961). In German. Through J. Textile Inst. 52: A277 (1961).
The residual water content of wool after drying depends on the relative humidity and temperature of the drying air. The weight accepted for international transactions is that found on drying with air from the standard atmosphere, i.e. that at 65% rh and 20° C. Sustmann (abstr. 2152/61) and Roberts (abstr. 237/60) have developed formulas for a correction factor k if the humidity and temperature of the drying air differ from normal. To get true regain, it is not sufficient, however, merely to add the factor k to the value calculated from the observed results. It is shown that the true dry weight or the true conditioned weight can be obtained by multiplying by $1/(1 + k)$ the respective values obtained from the observed results, and the true regain can be calculated accordingly. (5202)

Yarns E2

NEW STAINING TECHNIQUE FOR THE STUDY OF SKIN AND CORE OF NYLON YARNS. W. R. Berry (Am. Enka Corp.). Textile Research J. 31: 810-812 (Sept. 1961).
A new technique for the differential staining of skin and core structure of nylon 6 and 66 yarn cross-sections has been developed. The technique requires the use of two water-soluble dyes, Kiton Pure Blue V, an acid dye, and Methyl Violet 2B Supra I, a basic dye. With these two dyes there is no chemical swelling of the cross-section as with $ZnCl_2$, iodine staining. Also the skin of an undrawn filament, which is reported by some investigators to be undetectable, can be stained. 3 refs. (5203)

INTEGRATORS FOR USE WITH REGULARITY TESTERS. J. Grignet. Ann. Sci. Textiles Belges No. 1: 38-64 (1961). In French. Through J. Textile Inst. 52: A392 (1961).
The best known types of integrators are described, and their advantages and disadvantages are discussed. (5204)

METHOD OF MEASURING THE VOLUME OF WOUND YARN PACKAGES. M. J. Denton (Shirley Inst.). (Letter to the editor). J. Textile Inst. 52: T392-T393 (Aug. 1961).
The method is an application of Pappus' theorem which states that the volume of a solid of revolution is equal to the area of the revolving lamina multiplied by the distance moved per revolution by its centroid. Thus, the volume of a package can be calculated if the area of an axial section of the package yarn and the distance of its centroid from the package axis are known. (5205)

COUNT VARIATION. T. A. Subramanian, S. M. Patel, and H. G. Sreenivasachar. Indian Textile J. 71: 470-473 (June 1961).
A method for collecting and analyzing data to reveal the presence of excessive lea-to-lea count variation in a bobbin and of excessive bobbin-to-bottin count variation in a doff is described, and causes of the variations are discussed. (5206)

Fabrics E3

NEW METHOD OF MEASURING THICKNESS AND EMBOSSING IN TEXTILES. J. P. Malan. Dyer 126: 235 (Aug. 25, 1961).
The depth of impression in the fabric is picked up and transferred onto a projection screen by using a very light stylus which moves across the fabric. (5207)

COMPARATIVE TESTING OF FABRICS ON AN AIR-BURST TESTING INSTRUMENT AND IN AN AERODYNAMIC TUBE. L. V. Potapova. Technol. Textile Ind. USSR No. 1 (14): 44-51 (1960).
See abstr. 4051/60. (5208)

APPEARANCE OF WASH AND WEAR FABRICS AFTER HOME LAUNDERING. TENTATIVE TEST METHOD 88-1961T. AATCC Comm. on Wash & Wear. Am. Dyestuff Reptr. 50: P674-P678 (Sept. 4, 1961).
The method is a revision of AATCC Tentative Test Method 88-1960T (abstr. 4528/60). It incorporates all of the features of AATCC 88-1960T and the addition of a second evaluation procedure. These two evaluation procedures are termed low-angle and overhead procedures. The low-angle lighting procedure is recommended when the primary interest is in surface smoothness. The overhead lighting procedure emphasizes general appearance. (5209)

Other E4

RAPID PHOTOGRAPHIC METHOD FOR EVALUATION OF BLEACHING AGENTS. R. L. Liss and T. B. Hilton (Monsanto Chem. Co.). Chem. Specialties Mfrs. Assoc., Proc. 47th Ann. Meeting: 118-122 (Dec. 1960). Summary in Chem. Abstr. 55: 17014f (1961). (5210)

DEAD-STOP METHOD IN AUTOMATIC TITRATIONS AND CONCENTRATION CONTROL IN THE TEXTILE INDUSTRY. I. Rusznak and G. Lepenye (Textile Research Inst., Budapest). Magyar Kém. Lapja 16: 143 (1961). Summary in Chem. Abstr. 55: 17014i (1961). In Hungarian. (5211)

AUTOMATIC SPECTROGRAPH. Pretema Ltd. Daily News Record No. 196: 34 (Oct. 9, 1961).
The Spectromat Fs-2 is claimed to be suitable for the determination of dyestuff formulas, matching, measuring coloring substances in dye solutions, and comparing degrees of whiteness. Its operation is described. (5212)

PAPER CHROMATOGRAPHY OF SYNTHETIC DYESTUFFS. J. C. Brown (Ciba Ltd). Dyer 126: 238 (Aug. 25, 1961).
The general techniques of paper chromatography and the application of this analytical tool to the field of synthetic dyestuffs are described. (5213)

PAPER CHROMATOGRAPHIC METHOD FOR THE QUANTITATIVE DETERMINATION OF COPPER AND ZINC 8-QUINOLINOLATES. T. D. Miles, A. C. Delasanta, and J. C. Barry (Quartermaster Research & Eng. Command). Anal. Chem. 33: 685-687 (May 1961).

A quantitative method for determining small amounts of copper 8-quinolinolate and zinc 8-quinolinolate is described. The metal chelate is quantitatively dissociated into the metal and 8-quinolinol on a paper chromatogram. The metal is titrated with a complexone using a metal indicator. The method can be used to determine the copper 8-quinolinolate content of mildew-resistant treated textiles. 8 refs. (5214)

CRITICAL SURVEY OF DETERGENT LITERATURE. K. A. Schoenberg (Danish Govt. Home Economics Coun.). Am. Dyestuff Reptr. 50: 660-666 (Sept. 4, 1961).

Most of the reported work on detergency evaluation has been carried out with artificially soiled cloth. Nearly all of them contain carbon black or similar types of elementary carbon, in most cases mixed with fats and/or proteins and carbohydrates, and normally applied from carbon-tetrachloride suspensions. It appears, however, that these soils do not lead to washing results which can be compared with actual practice. Only a few attempts have been made to simulate natural soil by using synthetic street soil or natural vacuum cleaner dust. Quite a number of published papers are concerned with the relation between reflectance and soil-content of the cloth. Many formulas have been proposed for the course of the washing time or, in multiple wash series, the number of washes. Whiteness retention or soil redeposition has been estimated using artificial as well as natural soil. The latter is to be preferred. 45 refs. (5215)

TESTING DETERGENT MILDNESS. J. D. Justice, J. J. Travers, and L. J. Vinson (Lever Bros. Co.). Soap Chem. Specialties 37: 53-56, 99-104 (Aug. 1961).

Data obtained on some 30 commercial and experimental products using 4 testing procedures, 2 of which involve human subjects and 2 of which are carried out on animal skin are compared. The primary emphasis is on methodology and on the degree of correlation that exists among the methods utilized. 7 refs. (5216)

METHOD OF DETERMINING THE CONCENTRATION OF AQUEOUS SUSPENSIONS OF DYES DURING THE PREPARATION OF MOTHER SUSPENSIONS. V. K. Ponomarev and T. B. Filicheva. Khim. Volok. No. 3: 62-64 (1960). In Russian. Through BCIRA 41: 2816 (1961).

The method involves the measurement of the optical density of the suspension by means of a photocolorimeter. (5217)

ACID OR ALKALI CONTENT OF WOOL: DETERMINATION BY THE MEASUREMENT OF THE pH OF AN AQUEOUS EXTRACT. D. Hildebrand and M. Hirtz. Z. ges. Textil-Ind. 62: 705-710 (1960). In German. Through J. Textile Inst. 52: A123 (1961).

pH values were obtained of extracts made at various liquor ratios of 37 samples of wool representing a wide range of acid or alkali content, and the results were extrapolated to a liquor ratio of 1:0. The results were compared with the known acid or alkali contents. It was found that in the range 2.8 to 10.8 the pH values obtained by the I.W.T.O. method correlated well with the actual acid or alkali content; for very acid wools, however, acid content would be more reliably obtained by extrapolation or by using the pyridine method. (5218)

DETERMINATION OF THE IRON CONTENT OF DYES BY MEANS OF THE PHOTOELECTRO-COLORIMETER. V. K. Ponomarev and T. B. Filicheva. Khim. Volok. No. 3: 60-62 (1960). In Russian. Through BCIRA 41: 2815 (1961).

The dye sample is ashed and heated in a muffle furnace to completely oxidize all the iron present. The residue is treated with concentrated hydrochloric acid, the resulting solution is filtered, and ammonium thiocyanate is added to form the colored ferric thiocyanate. This compound is determined colorimetrically. (5219)

HEAT TRANSFER IN POROUS BODIES AT VARIOUS TEMPERATURES AND MOISTURE CONTENTS. L. Herminge (Swedish Paper Mills). Tappi 44: 570-575 (Aug. 1961).

The dynamic Angstrom method, in which the propagation velocity of a heat wave is measured, was used to determine the thermal conductivity of porous materials at various temperatures and moisture contents. The method permits reliable evaluation of the thermal conductivity at a mean temperature. 21 refs. (5220)

TESTING LIGHTFASTNESS IN FADING LAMPS. E. Brunnschweiler (Ciba Ltd). Ciba Rev. No. 3: 32-35 (1961).

Outline of the underlying principles and of the progress made to date in lightfastness testing, with special reference to carbon-arc and Xenon-arc fading lamps. (5221)

BIOLOGICAL METHODS OF TESTING MOTHPROOFING AGENTS. W. Frey. Melliand Textilber. 42: 102-107 (1961). In German. Through J. Textile Inst. 52: A395 (1961).

After surveying the development of test methods for mothproofing agents, from that of Titschack (1922) to the I.W.T.O. Standard Method (1956), the author presents a technique worked out along traditional German lines. A test sample is placed in a container (65 mm diam. x 15 mm high) for 14 days with 25 4-weeks-old larvae of Tineola bisselliella weighing together between 23 and 27 mg. Five tests are carried out on the treated wool, one test with untreated but otherwise identical or similar material, and one test with a standard material. The results of the tests are assessed visually by reference to a scale of 5 degrees of damage, the form of excrement, and the state of the larvae. Further tests may be made to determine the durability and serviceability of the proofing. Notes on breeding suitable larvae are appended. (5222)

DYE TESTS PINPOINT GROUPS ON POLYMERS. S. R. Palit. Chem. Eng. News 39: 40-41 (Aug. 7, 1961).

Two techniques can be used to detect certain groups on a polymer chain: the dye partition test and the dye interaction test. Carboxyl groups can be determined quantitatively. (5223)

PHOTOMETRIC DETERMINATION OF THE FASTNESS OF DYEINGS. D. Dal Monte Casani and L. D'Aria (Univ. Bologna, Italy). Boll. sci. fac. chim. ind. Bologna 19: 11-20 (1961). Summary in Chem. Abstr. 55: 17014g (1961). In Italian. (5224)

MILL MANAGEMENT F

PRODUCTION FORECASTING, PLANNING, AND CONTROL. 3d ed. E. H. Mac Niece. John Wiley & Sons, Inc., N. Y. 1961. 402 p. $9.75. (5225)

TEN YEARS' PROGRESS IN MANAGEMENT, 1950-1960. J. Eng. Ind. 83: 235-372 (Aug. 1961).
This special issue is devoted to papers on advances in management practice and philosophy over the past decade. (5226)

MODERN TEXTILE MANAGEMENT. PART 7. N. L. Enrick. Textile Inds. 125: 115-116, 134 (Sept. 1961).
Market survey procedures as an aid in management planning in the selection of styles and patterns are described. (5227)

DO YOU HAVE WHAT IT TAKES TO BE A SUPERVISOR? PART 5. W. Westbrook. Textile Bull. 87: 68, 72 (Sept. 1961).
Pointers for getting along with superiors and subordinates. (5228)

Industrial engineering F1

ANALYTICAL METHOD OF TRAINING/RETRAINING. Knitter 25: 43-44 (Aug. 1961).
Highlights of the Ladhams system for training hosiery personnel. (5229)

OBSERVE THESE RULES TO CUT FUEL BILLS. P. W. Sherwood. Can. Textile J. 78: 69-70 (Sept. 15, 1961). (5230)

APPLICATION OF DIGITAL COMPUTERS TO PLANT OPERATIONS AND CONTROL. J. H. Reynolds (Celanese Fibers Co.). Am. Textile Reptr. 75: 16, 40 (Sept. 7, 1961). (5231)

WORK STUDY: ITS APPLICATION TO WOOL TEXTILES. J. G. Reid. Textile Mfr. 87: 317-319 (Aug. 1961).
Points dealt with in this paper include: work flow, layout, and handling; job method improvement; machine performance; departmental and clerical organization; productivity standards; and incentives. (5232)

NYLON WASTE TREATMENT. B. T. Dean. J. Water Pollution Control Fed. 33: 864-870 (Aug. 1961).
Changes in the nylon waste disposal installation at Chemstrand's Pensacola plant over a three year period since start-up are described and explained. (5233)

Plant and equipment F2

PRESENT STATE REGARDING AUTOMATIC ELECTRIC DRIVES IN THE TEXTILE INDUSTRY, AND THE PROSPECTS FOR THEIR DEVELOPMENT IN THE NEAR FUTURE. K. S. Shishlo. Technol. Textile Ind. USSR No. 1 (14): 173-177 (1960).
Report of conference on the design and use of automatic electric drives for textile machinery and to the future development of such drives in the Soviet Union. (5234)

ZYTEL NYLON RESIN FOR MACHINERY PARTS. E. I. du Pont de Nemours & Co. Am. Textile Reptr. 75: 23, 51 (Sept. 14, 1961).
Zytel is proving an excellent replacement of conventional metals in textile machinery. The new resin has many advantages as illustrated in some of the applications described. (5235)

ARE YOU WASTING YOUR ELECTRICAL DOLLAR? E. W. Fair. Textile Bull. 87: 79-80 (Sept. 1961).
Suggested steps for reducing electrical power costs. (5236)

SURFACE TEMPERATURES OF TEXTILE MILL ELECTRICAL EQUIPMENT. Am. Inst. Electrical Engrs., Textile Ind. Comm. Am. Textile Reptr. 75: 41-43 (Sept. 21, 1961).
Summary of a report on allowable surface temperatures of electrical equipment for use in textile mills based on information supplied by 42 mill engineers. (5237)

SCIENCES G

Chemistry G1

QUANTITATIVE THEORY OF THE LOSS OF STRENGTH BY REGENERATED CELLULOSE FILAMENTS ON HYDROLYSIS BY ACID. R. J. E. Cumberbirch and C. Mack (Shirley Inst.). J. Textile Inst. 52: T382-T389 (Aug. 1961).
A model structure for regenerated cellulose that was proposed in an earlier paper (abstr. 688/61) is used to account in a quantitative way for the rate of loss in strength of cellulose filaments on hydrolysis by acid. A comparison between theoretical and observed values of loss in strength resulting from acid hydrolysis shows the two sets of values to be in good agreement. 11 refs. (5238)

CHANGE IN THE PROPERTIES OF CELLULOSIC FIBERS DURING FREEZING. A. N. Bykov and S. S. Frolov. Khim. Volok. No. 3: 33-37 (1960). In Russian. Through BCIRA 41: 2792 (1961).
The freezing, in water, of cotton fibers (scoured and bleached) and viscose rayon staple fibers leads to a marked weakening of molecular structure, a fall in DP, and an increase in the reactivity of the cellulose. These changes are more pronounced in cotton than in rayon, and are the greater the lower the freezing temperature. When the fibers are frozen in caustic soda solutions the lowering of DP is not so great as when the freezing takes place in water. Freezing with subsequent thawing causes a loss in strength of viscose rayon fibers. Repeated freezings progressively weaken the structure and reduce the strength of cellulosic fibers, but with each successive freezing the effect diminishes in magnitude. (5239)

RELATIVE INTENSITIES OF THE CRYSTALLINE X-RAY LINES IN CELLULOSE FIBERS. P. H. Hermans and A. Weidinger. J. Polymer Sci. 50: S10-12 (Mar. 1961). Through BCIRA 41: 2789 (1961).
Results for ramie (cellulose I) and 10 rayons (cellulose II) are compared with results obtained by previous investigators. Discrepancies are noted and commented on briefly. (5240)

DETERMINATION OF THE AVERAGE DEGREE OF POLYMERIZATION OF CELLULOSE BASED ON VISCOSITY MEASUREMENTS IN DIFFERENT SOLVENTS. J. Gelo, B. Wasiak, and A. Winczakiewicz. Przeglad Papierniczy 15: 321-327 (1959). Through Chem. Abstr. 51: 18103g (1961). In Polish. (5241)

SPECTROMETRIC INVESTIGATION OF CELLULOSE. PART 1. INFLUENCE OF MOISTURE ON THE INFRARED SPECTRUM OF CELLULOSE. O. Ant-Wuorinen and A. Visapää. Paperi Ja Puu 42: 367-372 (1960). In English. Through Chem. Abstr. 55: 18100d (1961). (5242)

CONSTITUTION OF CELLULOSE MICROFIBRILS. D. T. Dennis and R. D. Preston (Univ. Leeds). Nature 191: 667-668 (Aug. 12, 1961). (5243)

FINE STRUCTURE OF REGENERATED CELLULOSE AS REVEALED BY CHEMICAL SWELLING. J. Dlugosz and R. I. C. Michie (Brit. Rayon Research Assoc.). Polymer 1: 41-55 (1960). Through Chem. Abstr. 55: 18116d (1961). (5244)

ANNUAL REVIEW OF THE LITERATURE ON FATS, OILS, AND DETERGENTS. I. I. Rusoff (Gen. Foods Corp.). J. Am. Oil Chemists Soc. 38: 339-360 (July 1961); 423-442 (Aug. 1961).
This review brings up-to-date the previous review published in May and July 1960. (5245)

SURFACE ACTIVITY AND DETERGENCY. K. Durham, editor. St. Martin's Press Inc., N.Y. 1961. 250 p. $8.00.
Contents: Properties of detergent solutions--amphipathy and adsorption; Aggregation in detergent solutions; Wetting; Dirt removal; Effect of detergents on redeposition; Ancillary effects in detergent action; Polar interaction in detergency; Kinetics of adsorption and its relation to detergency; The evaluation of detergent efficiency. References. (5246)

FORCES IN DETERGENCY. PART 4. J. C. Harris (Monsanto Chem. Co.). Soap Chem. Specialties 37: 61-62, 104-106 (Aug. 1961).
The relationship of heats of adsorption of surfactants and of the forces of cohesion and adhesion to the energy value in detergent systems are discussed. (5247)

DETERGENTS: A GLOSSARY OF TERMS USED IN THE DETERGENTS INDUSTRY IN ENGLISH, FRENCH, SPANISH, ITALIAN, PORTUGUESE, GERMAN, DUTCH, SWEDISH, DANISH, NORWEGIAN, RUSSIAN, POLISH, FINNISH, CZECH, HUNGARIAN, RUMANIAN, GREEK, TURKISH, JAPANESE. G. Carrière. Elsevier Pub. Co., Amsterdam. 1960. 141 p. Available from D. Van Nostrand Co., Inc., 120 Alexander St., Princeton, N. J. $4.25. (5248)

IMPROVEMENT OF THERMAL STABILITY OF TEXTILE FIBERS. F. R. Eirich. Polytechnic Inst. of Brooklyn. 1959. 22 p. PB 153 958. $2.60. Available from Office of Technical Services, Washington 25, D. C.
The main objective of this investigation was to render synthetic fibers, nylon in particular, infusible. The study was limited to attempts at producing infusibility by chemical attack on the surface of the finished fibers or by coating with an infusible sheath. A considerable number of flameproofing, crosslinking, and coating agents were tried. The most satisfactory results were obtained by coating nylon fibers with a thin sheath of polyacrylonitrile. Two coating methods were found superior: (1) the fibers are soaked with a solution of a free radical initiator and exposed to acrylonitrile vapor; (2) exposure of UV activated fibers to acrylonitrile vapor. (5249)

TAILORING BETTER POLYMERS. Chem. Week 89: 69-72 (Aug. 26, 1961).
Summary on progress in the preparation of block and graft copolymers by the following techniques: use of chemically reactive polymers; catalytic reactions; radiation; photochemical reactives; and mechanical degradation. (5250)

IODINE-ABSORPTION BY POLYAMIDE 6. PART 1. ABSORPTION ISOTHERMS. S. Pacetti. Tinctoria 58, No. 4: 148-152 (1961). In Italian. Through BCIRA 41: 2795 (1961).
The iodine-absorption isotherms were studied on polyamide 6. The characteristic course of the isotherms, the phenomena of reversibility and hysteresis, the desorption rate, and x-ray analysis have proved the existence of a critical iodine concentration at which considerable variations in the physical behavior of the polyamide can be ascertained. The accessibility of the polyamide at this iodine concentration corresponds to its accessibility to water at the saturation limit. (5251)

RHEOLOGICAL AND SPRAY PROPERTIES OF DILUTE POLYMER SOLUTIONS. L. Cohen and G. W. Rodon (Army Chem. Center, Md.). J. Polymer Sci. 49: 377-383 (1961). Through Chem. Abstr. 55: 18166f (1961). (5252)

VINYL-LITHIUM INITIATED POLYMERIZATION. R. Waack and M. A. Doran (Dow Chem. Co.). Chem. & Ind. No. 30: 1165 (July 29, 1961).
Preliminary results on vinyl-lithium initiated polymerization of styrene as compared to butyl-lithium initiated polymerization are reported. (5253)

POLYMER SIDE GROUPS AS ANTISTATIC FACTORS. V. E. Shashoua (E. I. du Pont de Nemours & Co.). Daily News Record No. 175: 26 (Sept. 8, 1961).
A study on the correlation of polymer chemical structure with antistatic behavior indicated that certain functional groups are more effective in improving antistatic properties when they occur as side chain substituents rather than as part of the main polymer chain. (5254)

PHYSICAL CHEMISTRY OF MACROMOLECULES. C. Tanford. John Wiley & Sons, Inc., N. Y. 1961. 710 p. $15.00.
Contents: Introduction; Molecular structure; Statistics of linear polymers; Thermodynamics; Light scattering; Transport processes, viscosity; Electrostatic free energy and polyelectrolytes; Multiple equilibria; Kinetics of macromolecular reactions. References. (5255)

EYEING NEW PROFITS IN COMPLEX CHEMICALS. Chem. Week 89: 33-38 (Sept. 16, 1961).
The distinctive features of polymer production by coordinate linking or bonding and the advantages conferred by the bonding are discussed. Current work in the field is summarized. (5256)

REACTION OF PROTEIN THIOL AND DISULFIDE GROUPS WITH CUPRIC SULFITE SOLUTIONS. J. M. Swan. Aust. J. Chem. 14: 69-83 (1961). Summary in J. Textile Inst. 52: A468 (1961). (5257)

THE pH OF THE AQUEOUS EXTRACT OF RAW WOOL. G. Wibaux, G. Mazingue, and M. Van Overbeke. Bull. Inst. Textile France No. 92: 7-18 (1961). In French. Through J. Textile Inst. 52: A390 (1961).
Raw wool (54 lots) of different origin and fineness was tested for ether-soluble extract, water-soluble extract, yield, ash of water-soluble extract and alkalinity of the ash. Washed wool was tested for lanthionine content, solubility in urea and in alkali, and fineness. The pH varied with the origin of the wool. The pH can be used as a guide to the composition of scouring solutions, and, in conjunction with other tests, as a means of detecting raw wool which is abnormally alkaline. (5258)

INFRARED STUDY OF THE OXIDATION OF THE DISULFIDE BOND IN WOOL. A. Strasheim and K. Buijs. Biochim. Biophys. Acta 47: 538-541 (1961). Through J. Textile Inst. 52: A286 (1961).
When wool is oxidized by either peracetic acid or hydrogen peroxide, the disulfide bonds are changed to sulfonic acid groups via intermediate sulfenic and sulfinic acid groups. Samples of weathered wool contain sulfonic acid and sulfinic acid groups. (5259)

EFFECT OF SULFURIC ACID ON WOOL. PART 5. INVESTIGATION OF DYEING FAULTS CAUSED BY CARBONIZING. R. L. Elliott, R. S. Asquith, and B. J. Jordan (Bradford Inst. Technol.). J. Soc. Dyers Colourists 77: 345-349 (Aug. 1961).
The stability of serine sulfate to hydrolysis with various reagents was investigated. This ester group is stable to mild hydrolytic treatments both in the free amino acid and in wool protein. Faulty areas in laboratory carbonized and in commercially carbonized wool are shown to contain a higher concentration of these groups than the surrounding areas, and the groups are apparently responsible for the resistance to acid dyes. Sulfonated derivatives of the aromatic amino acids have not been detected in any fault, and are not therefore responsible for the characteristic unlevel dyeings. 14 refs. (5260)

REACTION BETWEEN PIE WOOL AND OXYGEN. I. K. Walker and W. J. Harrison. N. Z. J. Sci. 4: 26-54 (1961). Through J. Textile Inst. 52: A461 (1961).
The reaction between pie wool and oxygen was studied by measuring the rate of oxygen absorption and of behavior in a standardized ignition test. The reaction kinetics are similar to published data for the oxidation of unsaturated fatty acids, lending support to the view that spontaneous ignition of pie wool is due to atmospheric oxidation of unsaturated fats. (5261)

RELATION BETWEEN THE DISULFIDE CONTENT OF WOOL AND THE TWO-STAGE SUPERCONTRACTION OF WOOL FIBERS IN SOLUTIONS OF LITHIUM BROMIDE. W. G. Crewther and L. M. Dowling. Biochim. Biophys. Acta 46: 605-606 (1961). Through J. Textile Inst. 52: A285 (1961).
In wool fibers in which disulfide bonds were partly replaced by S-methyl groups, the level of the first stage of supercontraction increased, approaching that of the second stage as the disulfide content approached zero. In fibers in which disulfide bonds were increasingly replaced by $-S-CH_2-CH_2-S-$ cross-linkages, the level of the second stage of supercontraction diminished. These facts point to the possibility that the aligned polypeptide chains responsible for supercontraction are linked by disulfide bonds and that the bonds undergo exchange during second-stage contraction. The authors previously contended that these polypeptide chains were not cross-linked by disulfide bonds (abstr. 669/61). (5262)

EFFECT OF NITROSATION OF TYROSYL GROUPS ON VARIOUS PROPERTIES OF WOOL. M. Leveau, M. Caillet, and N. Demonmerot. Bull. Inst. Textile France No. 90: 7-24 (1960). Through J. Textile Inst. 52: A131 (1961). In French.
Wool was treated with nitrous acid and then tested for loss of weight, alkali-solubility, urea-bisulfite solubility, swelling, and its contents of amine nitrogen, cystine, cysteine, tyrosine, and combined copper. The alkali-solubility decreased after the nitrous acid treatment, except in the presence of cupric ions, when it increased. The urea-bisulfite solubility decreased after the nitrous acid treatment, whether or not cupric ions were present. The mechanism of these reactions is discussed. (5263)

DISTRIBUTION OF READILY REDUCIBLE DISULFIDE BONDS IN WOOL. J. M. Gillespie and P. H. Springell (appendix by S. J. Leach and I. J. O'Donnell). Biochem. J. 79: 280-287 (1961). Summary in J. Textile Inst. 52: A468 (1961). (5264)

Physics G2

RADIATION-INDUCED GRAFT COPOLYMERIZATION OF STYRENE TO CELLULOSE. PART 2. ACETYLATION OF THE GRAFT COPOLYMER OF CELLULOSE WITH STYRENE. Y. Kobayashi and R. Yamadera. J. Soc. Textile Cellulose Inds. Japan 17, No. 5: 441-445 (1961). In Japanese (English summary). Through BCIRA 41: 2838 (1961).
The graft copolymer is not soluble homogeneously in any solvent. The effect of acetylation was studied. (5265)

STUDIES ON NYLON 6 FIBERS IRRADIATED BY GAMMA-RAYS. PART 1. PRACTICAL PROPERTIES AND VISCOSITY-AVERAGE MOLECULAR WEIGHT OF UNDRAWN FIBERS IRRADIATED IN VARIOUS ATMOSPHERES. M. Hashimoto and H. Amemiya. J. Soc. Textile Cellulose Inds. Japan 17, No. 5: 446-450 (1961). In Japanese (English summary). Through BCIRA 41: 2796 (1961).
Cross-linking and fracture of the main chain occur in the presence of oxygen. (5266)

APPLICATIONS OF NUCLEAR RADIATION AND RADIOISOTOPES TO TEXTILE MATERIALS AND PROCESSES. A. A. Armstrong, Jr. and H. A. Rutherford. N. C. State Coll. School of Textiles, Raleigh, N. C. Nov. 1960. 72 p. NCSC-2477-1. Available from Office Technical Services, Dept. Commerce, Washington 25, D. C. $2.50.
Results of a study dealing with: (1) modification of fibers by exposure to radiation; (2) modification of fibers by in situ polymerization and/or graft polymerization of vinyl monomers; (3) application of beta gages to textile processes; and (4) use of tracers and activation analysis techniques. (5267)

EFFECT OF IONIZING RADIATION ON THE STRENGTH AND EXTENSION OF WOOL. G. Satlow. Melliand Textilber. 41: 1525-1527 (1960). In German. Through J. Textile Inst. 52: A175 (1961).
The wet strengths of single wool fibers after irradiation with neutron rays became progressively less as the radiation dose increased. Extension at break was affected to a smaller extent. The load-extension curves for all fibers were approximately parallel to those for untreated fibers. Mechanical and chemical effects of neutron irradiation are similar to effects of prolonged weathering. Gamma rays only slightly reduced the wet strength and extension of wool fibers; the effect on camel hair was more pronounced. (5268)

Biology G3

RELEASE OF HISTAMINE BY COTTON DUST EXTRACTS FROM HUMAN LUNG TISSUE IN VITRO. A. Bouhuys and S.-E. Lindell. Experientia 17, No. 5: 211-212 (1961). Through BCIRA 41: 2879 (1961).
Experiments in which an extract of cardroom dust was incubated in a suspension containing human lung tissue have shown that, under these conditions, histamine is liberated. These observations add support to the hypothesis that at least some of the symptoms of byssinosis are caused by a histamine-releasing substance present in cardroom dust. (5269)

MISCELLANY H

BASIC FACTS ABOUT THE CARPET AND RUG INDUSTRY. 1961 EDITION. Am. Carpet Inst., Empire State Bldg., New York 1, N. Y. 1961. 34 p. Free. (5270)

PROCEEDINGS OF THE TWENTY-SECOND AMERICAN COTTON CONGRESS, LUBBOCK, TEXAS, MAY 8, 9, 1961. Available from Cotton Economic Research, Univ. of Texas, P. O. Box 8020, Austin 12, Texas. 63 p. $2.00.

Cotton--a $22 billion U.S. industry, by B. C. Jackson, p. 5-8; Research: a sink or swim proposition for cotton, by W. R. Blake, p. 9-15; Cotton on the Texas high plains, by W. Smith, p. 16-17; Effect of the price squeeze on financing cotton production in the plains area, by S. Emens, Jr., p. 18-22; How to grow cotton and improve soil productivity, by F. Gray, p. 23-27; Variety developments needed to lower costs and increase income, by H. D. Loden, p. 28-31; Cost reduction potentials through production research, by C. L. Welch, p. 32-37; What the Kennedy farm program could mean to the cotton industry, by J. T. Ralph, p. 38-43; Volume testing of cotton quality, by D. Davis, p. 44-48; Markets and distribution, by F. M. Rhodes, p. 49-53; Why our mills use cotton, by R. W. Smith, p. 54-58; Trade and aid in the 60's, by E. M. Martin, p. 59-63. (5271)

INTERNATIONAL KNITTING CONGRESS PROCEEDINGS. Hosiery Trade J. 68: 82-95 (Aug. 1961).

Statistical picture of Europe's knitting industries, p. 82-85; General conditions of sale in the knitting industry, by H. Kennewell, p. 85-88; Advances in knitting control methods, by W. A. Dutton, p. 88-91; Hosiery: an expanding industry, by M. Fraenkel, p. 91-92; Hosiery and knitwear consumption, by B. E. Eggensberger, p. 92-93; Training for management, by R. van der Torn, p. 93-95. (5272)

NORTHERN TEXTILE ASSOCIATION ANNUAL MEETING 1961. Daily News Record No. 181: 1, 32 (Sept. 18, 1961). Southern Textile News No. 36: 3 (Sept. 16, 1961).

Report of special session on the promise and problems of automation. (5273)

BRITISH TEXTILE INSTITUTE CONFERENCE ON CREASE RESISTANCE AND RECOVERY, SCHEVENINGEN, HOLLAND. Daily News Record No. 176: 1 (Sept. 11, 1961).

Summaries of papers on the relationship of the structure of cross-linking agents to wash and wear finishing (W. A. Reeves, So. Reg. Research Labs.); aminoplast and acrylate polymer crease resistant coatings (R. Steele, Rohm & Haas Co.); new crease recovery tester based on "clinched fist" testing (L. B. Archibald, No. Ireland, Linen Ind. Research Assoc.). (5274)

NEWER FIBERS IN THE UNITED KINGDOM AND WESTERN EUROPE. A. Caress (Imp. Chem. Inds. Ltd). J. Textile Inst. 52: P331-P342 (Aug. 1961).

Prospects for manmade fiber consumption in the next decade in Western Europe are forecast, and the competitive position of the U.K. in this market are analyzed. (5275)

WOOL MARKETING AND WOOL FUTURES. J. Hardy (John Hardy & Co. (Bradford) Ltd). J. Textile Inst. 52: P298-P306 (July 1961).

A review of the wool marketing system since 1920 is made to indicate the extent to which modern standards have kept pace with scientific discovery. (5276)

MANMADE FIBERS: A GROWTH INDUSTRY FOR THE DIVERSIFYING SOUTH. J. Blicksilver. Georgia State Coll. of Bus. Admin., Atlanta, Ga. June 1961. 60 p. Research paper no. 20. Free.

Contents: The nature and early development of manmade fibers; Patterns of production, productive capacity, and productivity; Consumption trends and interfiber competition; Character of the manmade fiber industry; Manmade fibers, a desirable industry for the industrializing South; Locational factors in manmade fiber production. References. (5277)

MAIN LINES OF DEVELOPMENT OF THE TECHNIQUES AND TECHNOLOGY OF THE TEXTILE INDUSTRY IN THE PRESENT SEVEN YEAR PLAN. P. V. Belyshev. Technol. Textile Ind. USSR No. 1 (14): 1-7 (1960).

The program for the technical development of the Soviet textile industry during 1959-1965 is outlined. (5278)

BIBLIOGRAPHY OF CHEMICAL REVIEWS. VOL. 3. Chemical Abstracts Service. Am. Chem. Soc., Ohio State Univ., Columbus 10, Ohio. 1961. 106 p. $6.00.

Compiled from Chemical Abstracts, v. 54, 1960. Keyword and author indexes. (5279)

SCIENCE MAKES WOOL MOTHPROOF, SHRINKLESS, DRIP-DRY. J. Loughlin. Textile Mfr. 87: 331-333 (Aug. 1961).

This article on the research activities of the C.S.I.R.O. Wool Research Labs. briefly describes the following resultant advances in wool technology: Dieldrin mothproofing; G8 shrinkproofing; Si-Ro-Set creaseproofing; and Sironize wash and wear process. (5280)

C.S.I.R.O. RESEARCH REVIEW 1959-60. Commonwealth Scientific & Industrial Research Organization, Australia. 418 p.

Research carried out by the Wool Research Laboratories in the Divisions of Protein Chemistry, Textile Physics, and Textile Industry is covered on p. 276-291. (5281)

WAR OFFICE CLOTHING AND EQUIPMENT PHYSIOLOGICAL RESEARCH ESTABLISHMENT. E. T. Renbourn and H. C. W. Stockbridge. Ergonomics 4, No. 1: 73-79 (1961). Through BCIRA 41: 2685 (1961).

The history of the Establishment and the nature of the researches undertaken are briefly reviewed. Past work is discussed including problems of the soldier's load, his working environment, and his clothing and protective equipment. (5282)

A DIDEROT PICTORIAL ENCYCLOPEDIA OF TRADES AND INDUSTRY. C. G. Gillespie, editor. Dover Publications, N. Y. 1959. 485 p. Through BCIRA 41: 1782 (1961).

Selected plates from Diderot's Encyclopedie (1763-1772), supplemented by others from an Academy publication (1777), are reproduced with notes, an introductory essay, and an index. The initial section on Agriculture and Rural Arts includes plates on silkworms, hemp, cotton (including bowing and carding), and indigo and manioc; the section on Textiles has plates on wool, spinning, weaving, fulling, raising, combing and finishing, the stocking frame, silk, passementerie, ribbons and ornaments, the drawloom, Gobelins tapestries, carpets, upholstery, and dyeing; and the final, Miscellaneous Section includes plates on ropemaking. The whole provides a conspectus of machinery and techniques prior to the Industrial Revolution. (5283)

PATENT CHECKLIST

U.S. patents may be obtained from the U.S. Patent Office, Washington 25, D.C., for 25¢ a copy. Photostatic copies of foreign patents are also available. Charges for these photostats are based on the number of pages in the patent.

FIBERS A

Manmade fibers A2

COMPOSITE CRIMPED GLASS FILAMENTS. Owens-Corning Fiberglas Corp. BP 874 808, Aug. 10, 1961. (5284)

OLEFIN FIBERS WITH IMPROVED DYE AFFINITY. E. P. Goodings, G. W. Taylor, and W. A. O'Neill (to Imp. Chem. Inds. Ltd). BP 876 045, Aug. 30, 1961.
The fibers are treated with a fusible and hydrolyzable acid halide of a metal, phosphorus, or silicon. (5285)

HIGH TENACITY, HIGH MODULUS SYNTHETIC FILAMENTS. E. I. du Pont de Nemours & Co. BP 876 491, Sept. 6, 1961.
Methods for preparing oriented filaments from polyureas and polyamides having recurring cyclic groups which stiffen the polymer chains. The polymers have tenacities of 9 or more g/den, elongations on the order of 5%, and initial moduli greater than 180 g/den. (5286)

PROCESS FOR THE CONTINUOUS ACETALIZATION OF POLYVINYL ALCOHOL FIBERS RESISTANT TO SHRINKAGE IN BOILING WATER. Farbwerke Hoechst AG. BP 876 595, Sept. 6, 1961. (5287)

YARN PRODUCTION B

SPRAYING APPARATUS FOR THE CONDITIONING OF TEXTILE FIBERS. R. Brooksbank (to Walker & Smith, Batley, Ltd). BP 871 501, June 28, 1961. (5288)

TRANSFER TAIL FORMATION IN DRAWTWISTING. D. G. Bradley and S. Meaburn (to Imp. Chem. Inds. Ltd). BP 871 601, June 28, 1961. (5289)

DRAWTWISTER WITH SLIP COUPLING. J. E. Bromley (to Chemstrand Corp.). BP 873 256, July 19, 1961.
See abstr. 4596/60 (USP 2 952 115). (5290)

FALSE TWIST CRIMPING MACHINE. Socitex. BP 874 477, Aug. 10, 1961.
The overall size of the machine is reduced and its speed increased by an arrangement in which the heating tubes are vertical and the axes of their associated spindles are horizontal. (5291)

TEXTURING ACRYLIC FIBER YARNS. Chemstrand Corp. BP 876 104, Aug. 30, 1961.
Dimensionally stable, crimped yarn is produced by heat stretching the continuous filament yarn and concurrently twisting it, cooling to set the twist, untwisting, and heating for sufficient time to develop the latent crimp. The latter step may be performed after knitting or weaving. (5292)

HEATING DEVICE FOR FALSE TWIST CRIMPING MACHINE. Socitex. BP 874 478, Aug. 10, 1961.
The heating device consists of a block of aluminum provided with passages for a plurality of yarns and heated by means of a single element. (5293)

CONTINUOUS PROCESS AND APPARATUS FOR HEAT STRETCHING AND WINDING CONTINUOUS FILAMENT TOW. R. Lipscomb, R. B. MacLeod, R. H. Speakman, J. A. Briscoe, and J. Gillet (to Imp. Chem. Inds. Ltd). BP 874 651, 874 652, and 874 653, Aug. 10, 1961.
BP 874 652 relates to the production of high tenacity polymethylene terephthalate tows of at least 1000 denier by heat stretching. BP 874 651 and 874 653 relate to a traverse mechanism and bobbin changeover mechanism, respectively, for a high speed continuous tow winding machine. (5294)

FALSE TWIST CRIMPING DEVICE. F. Scragg and A. A. Chubb (to E. Scragg & Sons Ltd). BP 876 169, Aug. 30, 1961.
The device consists of a cylindrical element rotatably supported in the cusps formed by a series of rollers. (5295)

HEATING APPARATUS FOR TRAVELING YARNS. K. A. Hartley (to Courtaulds Ltd). BP 876 231, Aug. 30, 1961.
The apparatus consists of an electrically heated metal rod or tube fixed and supported at one end only so that a moving yarn may encircle the rod or tube in a series of helical convolutions. (5296)

STAPLE FIBER CUTTING MACHINE. N. J. Bond and C. W. Hooper (to Brit. Nylon Spinners Ltd). BP 876 814, Sept. 6, 1961.
In an apparatus for cutting continuous filament bundles into staple fiber, means for detecting and segregating tufts which will result in long fibers. (5297)

STOP MOTION DEVICE. S. D. Yates (to Brit. Nylon Spinners Ltd). BP 877 153, Sept. 13, 1961.
Device for sensing the breakage or running out of one yarn and for severing the other yarn during the doubling of two crimped yarns in a false twist crimping apparatus, e.g. BP 850 079 (abstr. 2268/61). (5298)

Opening, picking, fiber preparation B1

COTTON CLEANING APPARATUS. W. R. Karkoska. USP 2 993 237, July 25, 1961.
Apparatus for extracting or cleaning cotton from cotton bolls and associated trash. (5299)

Carding and combing B2

RECIRCULATION SYSTEM FOR AIR EXTRACTED FROM REVOLVING FLAT CARDING MACHINES. C. V. Ward (to Atmospheric Control Ltd). BP 875 172, Aug. 16, 1961. (5300)

Drawing and roving B3

DRAFTING APRON COMPOSITION. Dayco Corp. BP 875 429, Aug. 16, 1961.
The apron is composed of an outer layer of rubber and an inner surface of rubber mixed with a small amount of a fluorine-containing polymer lubricant. (5301)

FLYERS FOR SPEED FRAMES. H. Scowcroft (to T. M. M. (Research) Ltd). BP 875 690, Aug. 23, 1961.
The leg of the flyer which carries the presser foot is pivoted at a point intermediate of its length so as to be capable of swinging movement and the mass of the leg is distributed to prevent outward displacement due to centrifugal action. (5302)

SLIVER THICKNESS CONTROL FOR DRAWING FRAMES. Hanseatische Motoren-GmbH. BP 875 738, Aug. 23, 1961.
Variable speed drive responsive to deviations in sliver thickness. (5303)

Spinning, winding, twisting B4

FALSE TWIST TUBES. A. Dobson (to E. Scragg & Sons Ltd). BP 871 387, June 28, 1961.
Yarn threading and centering device consisting of a wire having the form of two spaced incomplete circles with coincident axes and parallel planes. (5304)

FALSE TWIST APPARATUS. F. Scragg (to E. Scragg & Sons Ltd). BP 871 388, June 28, 1961.
The yarn is wrapped around a cylindrical pin and rotating the pin in contact with moving belts or disc-shaped rollers about an axis parallel to the direction of yarn travel. (5305)

DRAFTING MECHANISM. S. L. Abbott (to Abbott Mach. Co.). BP 871 802, June 28, 1961.
Mechanism for reducing the initial twist of roving entering the drafting zone of a spinning machine to a value conducive to satisfactory drafting. (5306)

BALLOON CONTROL MECHANISM FOR SPINNING MACHINES. L. E. Bianco and P. R. Grangie (France). BP 874 308, Aug. 2, 1961. (5307)

LOCKING MEANS FOR TOP DRAFTING ROLL WEIGHTING DEVICE IN SPINNING MACHINES. J. J. Rieter & Cie AG. BP 874 328, Aug. 2, 1961. (5308)

STOP MOTION FOR TWO-FOR-ONE TWISTING MACHINES. F. Wright (to Prince-Smith & Stells Ltd). BP 874 367, Aug. 2, 1961.
Means for severing and trapping the intact yarn in the event of an interruption of either of the supply yarns between the delivery roll and the twisting unit. (5309)

PLYING APPARATUS. Deering Milliken Research Corp. BP 877 488 and 877 489, Sept. 13, 1961.
Plied yarns having a desired twist in both the overall yarn and in the individual strands are obtained by means of a plying-twisting-winding arrangement in which the plying, feeding, and takeup means are in substantially vertical alignment above one another. (5310)

RELEASABLE MOUNTING FOR TWISTING AND SPINNING SPINDLES. J. J. Keyser (Switzerland). BP 874 370, Aug. 2, 1961. (5311)

BOBBIN HOLDER FOR SPINNING AND TWISTING SPINDLES. E. Lucke (to Croon & Lucke GmbH). BP 874 625, Aug. 10, 1961.
The carrier sleeve is divided into several segments, the external diameter of which is smaller than the internal diameter of the bobbin sleeve. Under the action of the centrifugal force produced by weights disposed below the bobbin sleeve, the segments are caused to bear against the inner wall of the bobbin sleeve. (5312)

CREEL FOR SUPPLYING SPINNING MACHINES WITH CANS OF DRAWING FRAME SLIVERS. J. M. Sanglas Casanovas (Spain). BP 874 772, Aug. 10, 1961. (5313)

TWO-FOR-ONE TWISTING SPINDLE. F. Ridgway (to Arundel Coulthard & Co. Ltd). BP 875 647, Aug. 23, 1961.
To prevent fly and dirt being drawn down the center bore of the spindle and accumulating around and locking the yarn being drawn from a yarn package through the spindle, there is interposed between the non-rotary tube of the flyer unit and the eye of the spindle, a fixed tube of nylon to keep the yarn from contacting the spindle. (5314)

DETACHABLE, SELF-CONTAINED WINDING UNITS FOR SYNTHETIC FILAMENT SPINNING MACHINES. Barmer Maschinenfabrik AG. BP 875 715, Aug. 23, 1961. (5315)

PENDULOUS ROTARY BOBBIN HOLDER FOR SPINNING FRAMES. Bendix Corp. BP 875 736, Aug. 23, 1961. (5316)

RING FRAME CONTROL DEVICE. C. S. Adams and L. A. Deal. BP 875 781, Aug. 23, 1961.
See abstr. 2128/60 (USP 2 930 179 and 2 930 180). (5317)

WINDING MACHINE. F. Scragg and R. Holden (to E. Scragg & Sons Ltd). BP 875 883, Aug. 23, 1961.
Means for winding yarn twisted by means of a 2-for-1 spindle to ensure the maintenance of twist uniformity. (5318)

YARN TENSION REGULATING DEVICE FOR SPINNING FRAMES. Bendix Corp. BP 877 145, Sept. 13, 1961.
A bar brake, suspended from a pendulous type bobbin holder and bearing frictionally against the lower surface of a yarn package, terminates in a loop through which the yarn passes from the creel. The radial components of tension exerted by the unwinding yarn raise the bar brake away from the package surface to diminish braking. (5319)

DUST AND FLY REMOVAL APPARATUS FOR RING SPINNING FRAMES. E. Jacobi and H. Beck (Germany). BP 877 258, Sept. 13, 1961.
The apparatus consists of suction and blowing devices arranged to move simultaneously along opposite sides of a machine so that air blown from one device entrains dust and fly and is collected by the opposite suction device. The devices may alternate their blowing and suction action and their direction of travel. (5320)

SPINNING RING. Merriman Bros., Inc. BP 877 491, Sept. 13, 1961.
See abstr. 4347/58 (USP 2 850 866). (5321)

DETACHABLE MOUNTING FOR SPINNING SPINDLES. J. J. Keyser (Switzerland). BP 877 498, Sept. 13, 1961.
For ensuring the correct location of the spindle both radially and axially as well as its correct vertical alignment. (5322)

Yarns B5

YARN PACKAGE COVERING. A. Slade (to Brit. Nylon Spinners Ltd). BP 871 592, June 28, 1961.
The end of the polythene covering is closed in such a way that the free end of the yarn is exposed. This makes it possible to handle the package without soiling or damaging the outer windings. (5323)

REEL ASSEMBLING. M. G. Hopley (to R. Darton Gibbs & Co. Ltd). BP 871 683, June 28, 1961.
Method of securing flanges onto cardboard or wooden barrels by means of sheet metal ferrules. (5324)

METHOD AND APPARATUS FOR PRODUCTION OF BULK YARN. A. Richmond, R. A. King, A. H. Gentle, and W. Pool (to Brit. Celanese Ltd). BP 871 797, 871 798, and 871 799, June 28, 1961.
The yarn is subjected to the action of a stream of turbulent steam (871 797). The yarn is fed into the stream by way of a passage which is initially of small cross section; the cross section increases substantially at the end where the yarn emerges into the turbulent fluid (871 798). By varying the supply pressure of the steam, a slub yarn with voluminous neps disposed at intervals along its length is obtained (871 799). (5325)

COMPOSITE CARPET PILE YARNS. A. H. Gentle, A. Richmond, and N. J. Tunstall (to Brit. Celanese Ltd). BP 871 800, June 28, 1961.
Composite yarns obtained by twisting together viscose and acetate yarns of opposite twists and bulking them by the action of turbulent steam are claimed. (5326)

MACHINE FOR PRODUCING YARN PACKAGES FOR USE IN MAKING RUGS BY HAND. R. A. P. Forsell (to Littleton Street Woollen Spinners Ltd). BP 874 978, Aug. 16, 1961. (5327)

CHENILLE-LIKE YARN. VEB Tullmaschinenbau. BP 875 925, Aug. 23, 1961.
The yarn consists of a strip of fiber fleece oversewn in the longitudinal direction. (5328)

NYLON TIRE CORD PACKAGE AND BINDING DEVICE. Chemstrand Corp. BP 876 137, Aug. 30, 1961.
See abstr. 2595/60 (USP 2 932 388). (5329)

BLENDED YARNS CONTAINING POLYPROPYLENE. Montecatini Soc. Gen. L'Industria Mineraria Chimica. BP 876 928, Sept. 6, 1961.
Blended yarns containing highly crystalline polypropylene staple suitable for processing on worsted system are claimed. (5330)

BONDED GLASS FIBER STRANDS. Owens-Corning Fiberglas Corp. BP 877 492, Sept. 13, 1961.
Glass fibers are drawn off from a source of supply to form strands and several strands are bonded together at intervals along their length by the application of a synthetic resin binder. (5331)

TRANSFER TAILS FOR YARN PACKAGES. D. F. G. Mansfield and B. L. Rees (to Brit. Nylon Spinners Ltd). BP 876 212, Aug. 30, 1961.
The transfer tail is wound at one end of a tube, clear of the traverse used in winding the package, so that each succeeding turn of the tail overlaps the preceding one and the last turn leads into the yarn package. (5332)

MACHINE FOR PRODUCTION OF ROPE FROM NATURAL OR MANMADE FIBERS. C. J. Holm (Norway). BP 876 785, Sept. 6, 1961. (5333)

FABRIC PRODUCTION C

PLASTIC HORN GEAR FOR BRAIDING MACHINERY. E. C. Scanlon. BP 871 702, June 28, 1961. (5334)

BOBBIN HOLDER AND TENSION DEVICE FOR BRAIDING MACHINES. M. Ostermann, Sr., and M. Ostermann, Jr. (Germany). BP 877 810, Sept. 20, 1961.
See abstr. 316/60 (USP 2 911 875). (5335)

Warping, slashing, yarn preparation C1

YARN SPOOLS FOR STEAMING. I. Ciniglio (Switzerland). BP 870 004, June 7, 1961.
A cylindrical shell adapted to contract to a predetermined diameter under the pressure of yarn wound on its periphery and to expand to its original diameter on yarn removal is claimed. (5336)

TRAVERSE MECHANISM FOR WINDING DOUBLE TAPER YARN PACKAGES. P. S. Gracie (to Brit. Nylon Spinners Ltd). BP 871 429, June 28, 1961. (5337)

SIZING AGENTS FOR NYLON YARNS. J. H. Johnson and J. E. Fields (to Monsanto Chem. Co.). BP 871 589, June 28, 1961.
Water soluble propylene-maleic interpolymers are claimed. (5338)

WINDING SPINDLE DRIVE. E. Brierley and A. H. Norris (to Leesona Holt Ltd). BP 871 763, June 28, 1961.
Electromagnetic spindle drive for varying the speed of winding in accordance with the delivery speed of the yarn. (5339)

CELLULOSE SIZING AGENTS FOR USE IN AUTOMATIC WASHERS. Corn Prods. Co. BP 874 020, Aug. 2, 1961.
Cationic starch derivatives which may be applied to cellulose fibers and fabrics in the form of aqueous slurries of unswollen granules are claimed. Their use in automatic washers is described. (5340)

APPARATUS FOR WINDING COPS WITH RESERVE COILS. W. Reiners (Germany). BP 874 844, Aug. 10, 1961. (5341)

THREAD GUIDES. R. H. Robins (to United Insulator Co. Ltd). BP 877 291, Sept. 13, 1961.
Ceramic coated metal guides produced by flame spraying are claimed. (5342)

AUTOMATIC YARN WINDING MACHINE. W. Reiners (Germany). BP 875 963, Aug. 30, 1961.
Suction device for entraining and severing reserve yarn coil on tips of cops and for drawing off the intermediate winding and base end reserve coil. (5343)

AUTOMATIC BOBBIN WINDING MACHINES. W. Reiners (Germany). BP 876 115, Aug. 30, 1961.
In a multistation winding machine with a single thread restoring mechanism, the yarn leading to the package at each winding station is passed around the inboard side of a thread guide drum to prevent yarn damage and conserve space. (5344)

AUTOMATIC BOBBIN WINDING MACHINES. W. Reiners (Germany). BP 876 116, Aug. 30, 1961.
The invention relates to an improved method of mounting for winding and supply stations in multistation winding machines with single thread storing mechanisms in order to conserve space and prevent yarn damage. (5345)

Weaving C2

NARROW FABRICS. W. C. Arnold (to Bonas Bros. Ltd). BP 848 822 (Amended Specification), Sept. 21, 1960.
See abstr. 1727/61. (5346)

SELVAGE FORMATION IN GRIPPER SHUTTLE LOOMS. Sulzer Frères SA. BP 870 693, June 14, 1961.
See abstr. 4237/61 (USP 2 990 854). (5347)

DOUBLE LIFT DOBBY DRAW HOOK CONTROL. R. Staubli, H. H. Staubli, and O. Staubli (Switzerland). BP 871 653, June 28, 1961.
All of the draw hooks associated with the draw knife are lifted away from the knife by a movement of the latter for the next control of the hooks in accordance with the pattern. The hook needles serve only to retain the draw hooks which are not used on the next pick. (5348)

LOOM FOR WEAVING SHAPED FABRICS. E. Koppelman. BP 871 742 and 871 743, June 28, 1961.
Seamless, hollow, tapered curvilinear fabrics are woven on a loom in which the takeup roll is shaped to effect variations in the feed rates of selected warp ends (871 742). A fan-shaped reed having curved dent wires and heddle means for positioning the warp to conform to desired predetermined contours during successive sweeps of the reed are also covered (871 743). (5349)

PHOTOELECTRIC DEVICE FOR PRODUCTION OF PERFORATED PAPER CARDS FOR JACQUARD LOOM. Soc. des Mecaniques Verdol. BP 874 320, Aug. 2, 1961. (5350)

SHUTTLELESS LOOM. R. Dewas (France). BP 874 732, Aug. 10, 1961.
Means for manually reversing the motion of looms with stationary outside weft supply to allow for the removal of defective weft threads. (5351)

WEFT YARN END RETARDER FOR SHUTTLES. J. F. Schröder (to C. C. Egelhaaf KG). USP 2 996 084, Aug. 15, 1961.
Means for ensuring proper guidance and tension of the weft yarn as it passes out of the shuttle. (5352)

SHUTTLELESS LOOM. R. Wille and J. Klein (Germany). BP 874 914, Aug. 16, 1961.
In a pneumatic device for weft insertion, the leading part of the weft yarn is formed as a loop arranged across the path of the air jet, the loop being uncoiled by means of and in the direction of the air jet as it enters the shed. (5353)

YARN GRIPPER FOR AXMINSTER CARPET LOOM. R. J. Chatterley (to Ingenious Mechanical Prods. Ltd). BP 876 780, Sept. 6, 1961. (5354)

SPOOL AXMINSTER CARPET LOOMS. I. B. Bassindale (to T. M. M. (Research) Ltd). BP 876 875, Sept. 6, 1961.
Double-acting pneumatic braking device for tuft yarn spools for imposing different braking effects on the spools during their transfer to and from the tuft inserting station and during tuft insertion. (5355)

HEDDLES FOR WEAVING TWISTED WARP FABRICS. Sulzer Freres SA. BP 877 205, Sept. 13, 1961.
The heddles are made of steel strips each consisting of two standard heddles mounted on separate shafts and a half heddle located between the standard heddles and connected to a tensioning device by means passing between the standard heddle shafts. (5356)

Knitting C3

DRAWOFF MECHANISM FOR FLAT KNITTING MACHINES. Universal Maschinenfabrik GmbH. BP 871 772, June 28, 1961.
Continuously knit elements, the beginnings of which are much wider than the ends, are drawn off by the use of an inlay thread inserted over the entire width of the fabric at its beginning and held taut by the rocking movement of a pair of loaded clamps. (5357)

RUN-RESISTANT, SINGLE THICKNESS WELT. W. T. Osborne (to Bird & Yeomans Ltd). BP 874 134, Aug. 2, 1961.
The welt is knitted from a high twist bulk yarn in a mesh structure with a top edge cut to the required shape. (5358)

CIRCULAR KNITTING MACHINE SPLICING MECHANISM. Singer-Fidelity, Inc. BP 874 305, Aug. 2, 1961. (5359)

SINKER ASSEMBLY FOR FLAT WARP KNITTING MACHINES. A. W. H. Porter (to Hobourn F. N. F. Ltd). BP 874 717, Aug. 10, 1961.
A rotating roller is mounted between each adjacent pair of sinkers at the back of the needles to form a knockover edge extending parallel to the row of needles. (5360)

STOP MOTION FOR FLAT WARP KNITTING MACHINES. A. W. H. Porter (to Hobourn-F. N. F. Ltd). BP 874 745, Aug. 10, 1961.
The stop motion consists of a row of hooked members arranged over each thread and spaced by means of guides in which they are slidable. (5361)

WELT TURNING MECHANISM FOR STRAIGHT-BAR KNITTING MACHINES. B. H. Ford and D. J. Davey (to S. A. Monk Ltd). BP 874 991, Aug. 16, 1961. (5362)

PATTERNING MECHANISM FOR CIRCULAR KNITTING MACHINES. A. Planck (Germany). BP 874 719, Aug. 10, 1961.
In a dial-and-cylinder machine an additional patterning mechanism which controls the dial needles by means of needle slides is provided so that the needles may be operated either by the usual dial cams or by the patterning mechanism. (5363)

KNIT STRETCH FABRIC. G. A. Urlaub. BP 874 799, Aug. 10, 1961.
Method of knitting interlock two-way stretch flat or tubular fabrics with lines of demarcation defining strips along spaced wales. (5364)

SUCTION OPERATED YARN SEVERING MECHANISM FOR CIRCULAR HOSIERY MACHINE. Burlington Inds. Inc. BP 874 888, Aug. 10, 1961. (5365)

SELF-SUPPORTING KNEE LENGTH HOSE. J. H. Rowlett (to Foister, Clay & Ward Ltd). BP 875 652, Aug. 23, 1961.
The top is rib knitted from crimped nylon yarn. (5366)

HOSIERY INSPECTING AND STACKING DEVICE. R. E. Fuqua (to Marvel Specialty Co.). BP 875 657, Aug. 23, 1961.
See abstr. 796/61 (USP 2 964 221). (5367)

HOSIERY BOARDING APPARATUS. J. W. Illingworth and T. K. Morley (to Hosiery & Allied Trades Research Assoc.). BP 875 757, Aug. 23, 1961.
The hosiery is drawn onto forms and immersed in a bath consisting of a suspension of solid, heat-conducting particles. (5368)

CAM LOCK FOR HAND OPERATED KNITTING MACHINE. M. Wullimann (Switzerland). BP 875 966, Aug. 30, 1961. (5369)

CIRCULAR HOSIERY MACHINE OF THE KOMET TYPE. F. E. Deans and C. H. Wainwright (to Bentley Eng. Co. Ltd). BP 876 794, Sept. 6, 1961.
The various parts of the machine are made more accessible by mounting both the bottom needle cylinder and bottom cam box from a single stationary support and eliminating the usual intermediate plate. (5370)

CIRCULAR KNIT HOSIERY. A. Tester (to Montfort (Knitting Mills) Ltd). BP 877 060, Sept. 13, 1961.
To improve the heat insulation and air permeability characteristics of hosiery knit on an opposed cylinder circular machine, at least the underpart of the foot is knit of a tuck rib fabric to provide an openwork structure by means of walewise rows of eyelet holes. Needles devoid of lower latches are used, the tuck loops being formed while the needles are in the upper cylinder and the tuck stitches being completed with the needles in the bottom cylinder. (5371)

AUTOMATIC STITCH LENGTH CONTROL DEVICE FOR CIRCULAR KNITTING MACHINES. K. I. J. Rosen (Sweden). BP 877 176, Sept. 13, 1961. (5372)

METHOD OF KNITTING UNDERGARMENTS AS A SINGLE, FULL-FASHIONED PIECE. A. M. Harms (to Harms Hosiery Co. Inc.). BP 877 224, Sept. 13, 1961. (5373)

PNEUMATIC DRAWOFF MECHANISM FOR SEAMLESS HOSIERY MACHINES. F. L. Whitfield (England). BP 877 181, Sept. 13, 1961. (5374)

YARN SEVERING MECHANISM FOR SEAMLESS HOSIERY MACHINES. Burlington Inds. BP 877 182, Sept. 13, 1961.
Means for positioning yarns over the dial caps of multifeed machines for clipping and for automatically severing the yarns close to the fabric during yarn changes. (5375)

YARN SEVERING MEANS FOR SEAMLESS HOSIERY MACHINES. Scott & Williams, Inc. BP 877 195, Sept. 13, 1961.
The fins projecting from the dial of the machine in addition to guiding the loop transfer elements also serve to sever the yarn ends close to the fabric when yarn changes are made. Suction means for tensioning and removing the yarn ends during and after shearing, respectively, is provided. (5376)

GUIDE NEEDLE MOUNTING FOR WARP KNITTING MACHINES. Karl Mayer, Erste Hessische Wirkmaschinenfabrik GmbH. BP 877 217, Sept. 13, 1961. (5377)

CIRCULAR KNITTING MACHINE FOR TUCK RIBBED FABRICS. Etab. Bruley Freres a Estissac. BP 877 238, Sept. 13, 1961.
In a machine with 2 superposed needle cylinders, each of which is associated with a double cam track, one of the cam tracks is modified so that on alternate courses the loops are retained and two loops are cast off in intervening courses. (5378)

ELECTRONIC SPEED CONTROL CIRCUITS FOR CIRCULAR HOSIERY MACHINES. Singer Fidelity, Inc. BP 877 248, Sept. 13, 1961.
The potentiometers are insulated from high current surges by placing them in the control circuits of saturable core reactors which absorb the high current pulses from the load. (5379)

Fabrics C4

PILL RESISTANT FABRICS FROM BLENDED SPUN YARNS. Soc. Rhodiaceta. BP 870 017, June 7, 1961.
The yarns from which the fabrics are woven or knitted consist of high tensile strength synthetic fibers, e.g. nylon or a polyester fiber, blended with fibers of lower tensile strength, e.g. wool or acrylic fibers. (5380)

PROTECTIVE CLOTHING. Deutsche Gold und Silber Scheideanstalt. BP 871 323, June 28, 1961.
Clothing for protection against splashes for salt melts used in annealing baths and ranging in temperature from 550° to 900° C consist of woven or knit fabrics coated with silicone rubber. (5381)

MULTILAYER REVERSIBLE ABSORBENT BANDAGES. Kimberly-Clark Corp. BP 871 435, June 28, 1961. (5382)

GLASS FIBER REINFORCED POLYESTER RESINS. Svenska Oljeslageri AB. BP 874 759, Aug. 10, 1961.
The glass fibers are embedded in a dough formed from an unsaturated polyester resin and filler and the mixture cured to form a laminate. (5383)

MACHINE BELTING. W. Holland-Bowyer and W. Lord (to Dunlop Rubber Co. Ltd). BP 874 956, Aug. 16, 1961.
Rubber belting reinforced by yarns consisting of a core of continuous synthetic filaments and a sheath of staple fibers. (5384)

COMPOSITE PLEATED PILE FABRICS FOR RUGS AND BLANKETS. E. I. du Pont de Nemours & Co. BP 875 118, Aug. 16, 1961.
The fabric is composed of a pleated pile fabric superposed on a pleated skeletal material. The two materials are attached at the peaks of their respective pleats. (5385)

SEPARATING AND WINDING MACHINE FOR MAKING RIBBONS FROM CONTINUOUS WIDTHS OF FABRIC. H. S. Dessau (to Jersey Fabrics Ltd). BP 875 147, Aug. 16, 1961. (5386)

BONDED NONWOVEN FABRICS. Carl Freudenberg KG. BP 876 444, Aug. 30, 1961.
Nonwoven fabrics with excellent tear strength are produced by treating fibers, at least a portion of which are water-soluble, e.g. polyvinyl alcohol or alginate fibers, with an aqueous impregnating liquid so that the water-soluble fibers are partially dissolved, removing excess liquid, and bonding by drying at elevated temperatures. To render the resultant products resistant to boiling water, they may be further treated by cooking in an aqueous bath containing 5% formalin, 20% sodium sulfate, and 5% hydrochloric acid. (5387)

FINISHING D

FLUID BED PROCESS FOR THE WET TREATMENT OF TEXTILES. Shri Ram Inst. for Industrial Research. BP 874 232, Aug. 2, 1961.
To prevent drying and to maintain the desired moisture content of the material, a two stage treatment is used consisting of initial passage at a high temperature for 1 to 3 sec through a fluid bed followed by passage through a second chamber in which the fabric is heated in a gaseous atmosphere for 10 to 60 sec at a lower temperature. (5388)

DEVICE FOR MEASURING THE SURFACE TEMPERATURE OF ROTATING CYLINDERS. R. J. E. Cumberbirch (to Brit. Cotton Ind. Research Assoc.). BP 875 025, Aug. 16, 1961. (5389)

PRODUCING WASHFAST REACTIVE FINISHES ON CELLULOSE FIBERS. T. Watson (to Imp. Chem. Inds. Ltd). BP 875 364, Aug. 16, 1961.
An aqueous solution of a compound capable of reaction with cellulose, e.g. reactive dyes or cross-linking agents, and applied to the fabric and the moist, impregnated material is subjected to the action of an electric current in the presence of an electrolyte. (5390)

Chemical processes D1

FLUORESCENT THIOPHENE-DIOXIDE BRIGHTENING AGENTS. O. Dann (Germany). BP 871 351, June 28, 1961. (5391)

APPARATUS FOR STEAMING CONTINUOUS FIBER FLEECE. Fleissner & Co. GmbH. BP 873 992, Aug. 2, 1961. (5392)

MODIFICATION OF CELLULOSIC MATERIALS. J. Earnshaw, J. A. Moyse, R. Sause, and W. E. Stephen (to Imp. Chem. Inds. Ltd). BP 869 659 and 869 660, June 7, 1961.
Textiles composed of cotton or viscose rayon are treated with triazine compounds, free from organic chromophoric groups, and carrying as substituents at least one halogen or sulfonic acid group and an amine bound via the N atom and containing at least one solubilizing group. The modified textiles are thereafter treated with finishing agents capable of reacting with the groups introduced by the primary modification. (5393)

APPARATUS FOR COATING FABRICS WITH POLYVINYL CHLORIDE OR RUBBER. F. T. Berry and L. Landau (to Barrow, Hepburn & Gale Ltd). BP 871 462, June 28, 1961. (5394)

ELASTOMER-COATED NYLON FABRICS. E. I. du Pont de Nemours & Co. BP 871 582, June 28, 1961.
Fabrics with extremely high resistance to heat and chemicals consist of a woven or nonwoven nylon fabric coated with the reaction product of a vinylidene fluoride and a hexafluoropropene. (5395)

STILBENE-TRIAZOLE OPTICAL WHITENING AGENTS FOR USE IN DETERGENTS. Hickson & Welch Ltd. BP 874 611, Aug. 10, 1961. (5396)

WOOL SHRINKPROOFING PROCESS. R. N. Barber (to N. Corah Ltd). BP 874 630, Aug. 10, 1961.
The wool is treated with an aqueous solution of sodium chlorite and sodium hypochlorite. (5397)

SHRINK-RESISTANT FINISHING OF KNITTED TUBULAR FABRICS. Meyer-Waespi & Cie AG. BP 874 916, Aug. 16, 1961.
The fabric is stretched laterally, inserted between a pair of endless conveyor members, released by a predetermined amount, and fixed and pressed. (5398)

CHLORITE BLEACHING OF CELLULOSE. F. R. W. Sloan (to Bleachers Assoc. Ltd). BP 875 020, Aug. 16, 1961.
Chlorite bleaching can be carried out at high pH in an unbuffered solution by the use of monomethylol dimethyl hydantoin or a dimethyl hydantoin formaldehyde resin activator. (5399)

METHOD AND APPARATUS FOR BUTT-SPLICING STRIP FABRIC. W. Brey (to Firestone Tire & Rubber Co.). BP 875 176, Aug. 16, 1961.
Apparatus for the preparation and treatment of the edges of rubberized tire fabric to provide for an improved splice when short strips of the fabric, cut on a predetermined bias angle, are joined to form a continuous web. See abstr. 3294/61 (USP 2 979 106). (5400)

STILBYL-TRIAZOLE OPTICAL WHITENING AGENTS. D. A. W. Adams and A. K. Sarkar (to Hickson & Welch Ltd). BP 875 274, Aug. 16, 1961. (5401)

SHRINKPROOFING TREATMENT OF WOOL. Tensora Erzeugnisse Konservierungsverfahren. BP 876 126, Aug. 30, 1961.
The wool is subjected to the action of an aqueous medium containing a salt of diaminomethanesulfinic acid and then oxidized. (5402)

POLYVINYL ACETATE COATING COMPOSITIONS. Nopco Chem. Co. BP 876 226, Aug. 30, 1961.
Compositions suitable for application to fabrics comprise a blend of a plasticized polyvinyl acetate resin emulsion and a wax emulsion including an acid-stable emulsifier. (5403)

CREASE RESISTANT RESIN COMPOSITION. W. W. Bakke and W. F. Tousignant (to Dow Chem. Co.). BP 876 649, Sept. 6, 1961.
See abstr. 2651/60 (USP 2 930 716). (5404)

WATERPROOFING CELLULOSE FABRICS. R. J. Berls (to Armour & Co.). BP 877 098, Sept. 13, 1961.
The fabric is impregnated with a monoalkenylsuccinic acid or anhydride and heat cured. (5405)

RESIN FINISHING PROCESS FOR CELLULOSE. H. B. McCance and F. R. W. Sloan (to Bleachers' Assoc. Ltd). BP 877 582, Sept. 13, 1961.
The treatment of cellulose with amino-aldehyde cross linking agents is carried out in the presence of a polyester containing free acidic groups as the sole catalyst thus preventing any degradation of cellulose. (5406)

PROCESS FOR TREATING WOOL TO IMPART WATER REPELLENCY AND RESISTANCE TO SHRINKAGE. E. Robbart. BP 877 593, Sept. 13, 1961.
The moisture content of the wool is reduced to 4-7% of its dry weight and the wool is exposed to an organo silicon halide in vapor form. (5407)

STIFFENED CELLULOSE TRIACETATE FABRICS. R. J. Mann and J. Biedawski (to Brit. Celanese Ltd). BP 877 721, Sept. 20, 1961.
Stiffened fabrics, suitable for collars, are obtained by swelling and softening the fabrics with acetic acid or diethylene glycol diacetate, washing away the organic material with water, and drying. (5408)

LIME AND SODA STABLE DETERGENT COMPOSITIONS FOR WOOL SCOURING. E. F. Drew & Co. BP 877 897, Sept. 20, 1961. (5409)

SHRINKPROOFING WOOL. M. J. Scott (to Monsanto Chem. Co.). USP 2 993 747, July 25, 1961.
Wool in the form of raw stock, tops, yarns, or fabrics is treated with an aqueous solution or suspension of trichlorocyanuric and/or dichlorocyanuric acid. (5410)

CHEMICALLY MODIFIED COTTON. C. M. Welch (to U.S. Secy. Agri.). USP 2 993 888, July 25, 1961.
The reaction of cotton with organic isocyanates in the presence of alkyl phosphites to form N-substituted cellulose carbamates is claimed. (5411)

Dyeing and printing D2

DIQUATERNARY AMMONIUM COMPOUNDS FOR USE AS LEVELING AGENTS IN DYEING ACRYLIC FIBERS WITH BASIC DYES. Ciba Ltd. BP 874 033, Aug. 2, 1961. (5412)

ACYLATED AZO DYES FOR ACETATE FIBERS. J. M. Straley and D. J. Wallace (to Eastman Kodak Co.). BP 876 090, Aug. 30, 1961. (5413)

FAST BLACK DYEINGS ON POLYESTER FIBERS. Farbwerke Hoechst AG. BP 870 045, June 7, 1961.
A binuclear black base suitable for oxidation dyeing is absorbed onto the fiber and the oxidation is carried out by means of an acidified aqueous solution or dispersion of a compound yielding a hypohalous acid on hydrolysis or by means of an acidified chlorite solution. (5414)

AZOPYRIMIDINE DYES FOR ACRYLIC FIBERS. Am. Cyanamid Co. BP 871 624, June 28, 1961. (5415)

VIGOUREUX PRINTING PASTE. A. C. Birtwistle (to Imp. Chem. Inds. Ltd). BP 871 769, June 28, 1961.
The printing paste contains a reactive dye and a condensate of ethylene oxide with a fatty alcohol or a phenol. (5416)

PRODUCING WATER-INSOLUBLE AZO DYES ON POLYESTER FIBERS. Farbwerke Hoechst AG. BP 874 025, Aug. 2, 1961.
Washfast yellow dyeings are obtained by treating the fibers with an unsubstituted 4-aminoazobenzene and diazotizing in the presence of a 1-aryl-5-pyrazolone coupling agent at 100° C. (5417)

PRODUCTION OF INSOLUBLE AZO DYES ON POLYESTER FIBERS. Farbenfabriken Bayer AG. BP 874 118, Aug. 2, 1961.
Diazotization at high temperatures is avoided by adding customary ice color coupling components to the material either together with or consecutively with the diazoamino compounds. (5418)

DYEING CELLULOSE WITH SULFUR DYES. Cassella Farbwerke Mainkur AG. BP 874 151, Aug. 2, 1961.
Cellulose fibers are dyed with sulfur dyes in the form of water-soluble thiosulfonic acids at elevated temperatures in the presence of an alkali metal sulfhydrate as a reducing agent. (5419)

DEVICE FOR REMOVING SAMPLES FROM LOOPED WEB IN A CLOSED PRESSURE DYEING CONTAINER. Maschinenfabrik Benninger AG. BP 874 444, Aug. 10, 1961. (5420)

WOOL DYEING WITH WATER-INSOLUBLE REACTIVE DYES. W. P. Mills, B. N. Parsons, and C. Y. Reed (to Imp. Chem. Inds. Ltd). BP 874 513, Aug. 10, 1961.
The dyebath has an initial pH of less than 7 which is subsequently raised during the dyebath by the addition of an alkali salt. (5421)

ORGANIC PIGMENTS FOR SPIN DYEING SYNTHETIC FIBERS. Ciba Ltd. BP 875 039, Aug. 16, 1961. (5422)

CARRIER FOR DYEING OR PRINTING POLYESTER FIBERS WITH DISPERSE OR VAT DYES. Badische Anilin- & Soda-Fabrik AG. BP 875 055, Aug. 16, 1961. (5423)

DYEING PROCESS FOR PROTEIN FIBERS. B. N. Parsons and E. Waters (to Imp. Chem. Inds. Ltd). BP 875 105 and 875 106, Aug. 16, 1961; BP 875 451, Aug. 23, 1961.
The use of aqueous dispersions of anthraquinone dyes (875 105) and azo dyes (875 106 and 875 451) free of sulfonic and carboxylic acid groups is claimed. (5424)

DYEING CELLULOSE/PROTEIN FIBERS WITH COLD DYEING REACTIVE DYES. J. K. Collins and D. R. Lemin (to Imp. Chem. Inds. Ltd). BP 875 163, Aug. 16, 1961. (5425)

PROCESS FOR DYEING OR PRINTING FIBROUS MATERIALS. Ciba Ltd. BP 875 712, Aug. 23, 1961.
Washfast dyeings of water-soluble dyes having little fiber affinity are obtained by impregnation of the fabric with an aqueous medium containing the dye and a water-dispersible aminoplast followed by heating to harden the aminoplast. (5426)

DYEING PROCESS FOR CELLULOSE. T. L. Dawson, I. D. Rattee, I. Seltzer, and A. H. Wyld (to Imp. Chem. Inds. Ltd). BP 875 862, Aug. 23, 1961.
The use of acid-binding agents in conjunction with water-insoluble reactive dyes is claimed. (5427)

HIGH TEMPERATURE DYEING MACHINE. H. Krantz and W. Krantz (Germany). BP 875 987, Aug. 30, 1961.
Means for improving the thermal economy of high temperature machines equipped with a supplementary pump for pressure generation. (5428)

DIAZO DYES CONTAINING TRIAZINE RESIDUES FOR CELLULOSE FIBERS. Ciba Ltd. BP 876 092, Aug. 30, 1961. (5429)

LIQUID CIRCULATING PUMP FOR PACKAGE DYEING MACHINE. Callebaut de Blicquy Etab. SA. BP 876 506, Sept. 6, 1961. (5430)

DYEING AND PRINTING OF NITROGENOUS FIBERS WITH PHTHALOCYANINE DYES. J. R. Geigy AG. BP 876 691, Sept. 6, 1961.
Phthalocyanine dyes obtained by sulfating phthalocyanine sulfonic acid alkanolamides or cycloalkanolamides free from sulfonic and carboxylic acid groups. (5431)

BACK GRAY FOR ROTARY PRINTING MACHINES. Gillet-Thaon Etab. BP 876 834, Sept. 6, 1961.
The warp and weft threads of the back gray (the web of material interposed during printing between the fabric to be printed and an endless apron) each consist of a nylon monofilament arranged to provide openings of 1 sq mm. The resultant back grays retain the excess ink in the fabric cells and are easily washed and dried. (5432)

AZO DYES CONTAINING A MONOHALOGENATED TRIAZINE NUCLEUS FOR CELLULOSE DYEING. Ciba Ltd. BP 876 923, Sept. 6, 1961. (5433)

PRINTING PASTES. G. A. Bennett, W. Clarke, and J. Stirling (to Imp. Chem. Inds. Ltd). BP 877 028, Sept. 13, 1961.
The stability on storage of printing pastes containing dyes carrying at least one 4:6-dihalogeno-1:3:5-triazin-2-ylamino group can be improved by the addition of an organic sulfur derivative. (5434)

STABLE AQUEOUS PIGMENT PRINTING PREPARATIONS CONTAINING WATER-INSOLUBLE RESINS. Ciba Ltd. BP 877 235, Sept. 13, 1961.
The invention relates to a kneadable paste which is converted through a phase reversal into an oil-in-water dispersion by the addition of water. (5435)

WATER-IN-OIL PIGMENT PRINTING PASTE. Farbenfabriken Bayer AG. BP 877 369, Sept. 13, 1961.
Superior fastness and far greater selectivity of binding agents is possible with the system claimed in which the binding agents are exclusively contained in the inner aqueous phase. The binding agents may consist of combinations of water-soluble and water-insoluble components. (5436)

DYEING PILE CARPETS. G. W. Lewis (to Courtaulds Ltd). BP 877 486, Sept. 13, 1961.
The dye is sprayed onto a traveling length of carpet by one or more atomizing spray guns. (5437)

DYEING PROCESS FOR WOOL FIBERS WITH DISPERSE NITRO OR AZO DYES. B. N. Parsons and E. Waters (to Imp. Chem. Inds. Ltd). BP 877 666 and 877 667, Sept. 20, 1961. (5438)

WATER-IN-OIL EMULSION PIGMENT PRINTING PASTES. Interchemical Corp. BP 877 865, Sept. 20, 1961.
Pigment prints of good fastness can be obtained using conventional aging equipment with a paste in which the aqueous phase contains a binder having reactive hydrogens and the water-insoluble phase contains in addition to the pigment concentrate a trialkylene 1,2-phosphoramide cross-linking agent. (5439)

WATER-SOLUBLE TETRA-AZA-PORPHIN DYES FOR CELLULOSE. Farbenfabriken Bayer AG. BP 877 894, Sept. 20, 1961. (5440)

AFTERTREATMENT FOR IMPROVING THE WET-FASTNESS OF REACTIVE DYEINGS ON CELLULOSE. Ciba Ltd. BP 877 948, Sept. 20, 1961.
In order to prevent the bleeding of the dyed fabrics in washing and wet ironing due to residual dyes which have penetrated strongly into the fibers but have not reacted with them, the fabrics are aftertreated with an organic agent containing at least one basic nitrogen atom, e.g. the reaction product of dicyanamide, a monohydrochloride of an alkylene diamine, and formaldehyde. (5441)

DYE JIGS. N. Tomlinson (to Walkden, Makin & Co. Ltd). BP 878 047, Sept. 20, 1961.
The fabric rolls are driven through magnetic slip or eddy current couplings from constant speed shafts driven in opposite directions, the fabric passing under a roller in the dyebath which drives a generator to regulate the speed. (5442)

COLORING NITROGENOUS FIBERS WITH DIAZO COMPOUNDS. C. Bene (to A. P. De Biro & Co. Ltd). USP 2 987 368, June 6, 1961.
Wool, nylon, silk, and other nitrogenous fibers are colored without the use of dyes by treating them in a hot, aqueous first bath containing sulfuric or hydrochloric acid and an aminonaphthol or naphthylamine sulfonic acid and in a second cold, aqueous bath containing sodium nitrite. When the aminonaphthol sulfonic acid is used, permanent color is developed by treatment in a third bath with a colored inorganic metal salt. (5443)

Mechanical processes D3

PHOTOELECTRIC CONTROL DEVICE FOR WEFT STRAIGHTENING EQUIPMENT. H. Mahlo (Germany). BP 871 325, June 28, 1961. (5444)